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FARM NOTES FOR JUNE.

Good cultivation should now be bestowed upon all crops that will admit of it. Frequently stirring the soil with the cultivator or plow is very important to the growing crop. By this stirring process the ground is kept moist, and the injurious effects of a severe drouth may, to a great extent, be avoided. Ground that is not stirred becomes hard and dry, and plants cannot thrive in such a soil; but a well-stirred soil is always cool and moist, as every farmer knows who has thrust his hand into it. A well-stirred soil acts somewhat like a mulching, preventing that rapid escape of moisture in the earth, which occurs where the particles in the soil are not moved. It also more readily absorbs the moisture in the atmosphere, as well as fertilizing properties in the air, so essential to the growth of plants. Even if weeds did not have to be eradicated, we should say stir the soil frequently and thoroughly. And here lies the great

blessing of weeds, for, detest them as we do, we are compelled to admit they are a positive blessing. In our efforts to eradicate them, we are compelled to stir the soil frequently, and thus the essential elements of the nutrition of plants, viz: air, moisture and heat, are admitted to the roots of the plants. Were there no weeds to destroy, all this labor would be considered by most persons unnecessary. Corn, potatoes, root crops, the small fruits, and all crops which will admit of the soil being stirred about them, should now receive due and proper attention.— If the cultivator can be run through them twice a week, so much the better.

HAY MAKING.—A good deal of hay will be made this month. Most kinds of grass should be cut soon after it is in bloom, and the hay will be better than if the grass stood longer. With Timothy, however, it is somewhat different: the seeds of this grass should have reached the doughy state before being cut. The hay will be more valuable and be liked better by stock. Oats and wheat should not stand till the straw turns yellow before being cut, but if the seeds are in the milky, or perhaps doughy state, it is time they should be cut. The yield will be greater than if allowed to stand longer.

Take great pains in curing your hay. Don't cut down more than you can secure at night.— Grass should not be allowed to lay on the ground more than one night, and if put in the cock or winrow the same day it is cut, it will be far better. We like to see sweet, bright palatable hay for all kinds of stock. It costs but little more to have such, and its nutritive properties are double that which has been exposed to dews and storms, and the sun's burning rays, after it should have been in the stack or barn.

LIQUID STONE.

In a former volume of the *Valley Farmer* we gave some account of a most valuable discovery made in New York, by which stone is rendered liquid so as to be readily molded into any desired form for any kind of building, fencing, &c., at a remarkably cheap rate. Claiming this latter important requisite at the beginning of the discovery, so as to render the material of universal application, it must, when the improvement in its manipulation shall still further reduce the cost of preparation, render it one of the most valuable discoveries of the age.

In a late number of the *N. Y. Commercial Advertiser* we find the following allusion to the subject that will throw some light upon the progress of the discovery:

In the immediate vicinity of the Lunatic Asylum at Bloomingdale, is a building evidently used as a manufactory; for during the day there ascends from the smoke-stack and steam-funnels those unerring indications of the presence of the great motor. Within this establishment are twenty powerful machines employed in converting into powder fragments of rock. The process is that of stamping or crushing, instead of grinding; twenty stampers of about sixty pounds each falling at the rate of four blows per second, crush and pulverize the mass of rocks, which are placed for the purpose upon the chilled iron anvils.

As fast as the rock is converted into powder it falls into a trough below, and is thence collected into a common receptacle, whence it is conveyed to a "diger," where a singular transformation takes place. It is here rendered soluble by means of super-heated steam and chemical alkaline preparations which convert the mass into "liquor of flint." The metals which combine with the rock or quartz are not affected by this action, and may readily be separated, thus rendering the process invaluable when applied to rock containing the precious or useful metals. Were this the only service to which this invention could be applied it would still be useful, and in many gold-bearing localities highly valuable; but while this was, with the inventor, the primary intention, his research and experiments have enabled him to produce a material which is destined to take rank as one of the most useful that the mind of man has ever yet disclosed.

The liquor, after being drawn from the digester, can be poured into molds of any conceivable form, and, the liquid stone crystallizing, can be converted into the hardest con-

glomerate, making it invaluable for almost any purpose to which it may be desired to convert it. Not only can coarse pavements be formed in this manner, but bricks can be made much cheaper and of better quality than from clay by the present process.

The invention is not confined to these uses even, for the finest marbles may be molded at will, and made to assume any shape desirable. Paint made from it is incombustible, and will protect anything covered with it as perfectly as if it were stone. A slight and inexpensive previous preparation of the wood of ships' bottoms with one or two coats of the properly prepared flint, will make a petrified surface, combining with the woody fibre, as durable as copper, and it will always keep free and clean. In fact this new agent, or rather this new discovery from Nature's great laboratory, is applicable to so many purposes, that, in its present imperfect state, we cannot conceive what may not be done with it.

A VOICE FROM EGYPT.

We would like to hear from an Egyptian oftener. Hear him:

MONROE CO. ILL. March, 1861.

FRIEND EDITOR:—I have frequently, during the past few months, debated with myself the expediency, or indeed the propriety, of a comparatively illiterate and unsophisticated rustic like myself, "sitting in the darkness of Egypt," volunteering my services as a contributor to your valuable periodical. Yet, at times, I feel an irresistible impulse urging me to cast my mite into the general treasury of useful knowledge for the information of my brethren of the honorable and interesting profession of farming. Whether, in the present instance, I may have yielded to the influence of a laudable ambition to advance their interests by venturing a few useful suggestions, or rather to the "mania scribendi" (said to be a rather prevalent distemper among writers for the press), I shall leave your Editorship to judge; but I trust that I will at least receive credit for the best intentions in the world, if I have failed in adding interest to my subject by the charm of novelty or the sublimity of conception. But, to my subject:

It seems to me that our farmers are so negligent of their duties, and at the same time so forgetful of their true interests as to require the argumentative power of an Aristotle to convert them from the error of their ways. There is one of those disciples of Epicurus living in this locality to whom, on a recent occasion, your inde-

fatigable agent ventured to address himself with a view to procuring his subscription to the *Valley Farmer*. I was astounded at the result.—Could you imagine it? A farmer—proprietor of the broad acres he cultivates in the rich prairies of Illinois—actually answered that he could not afford it! Times were too hard! This man has, of a truth, stowed away his winnowing fan under the drippings of the eaves of his barn. Poor man! I should not wonder that he felt, times hard; and I will venture the assertion that he will always find them so as long as he continues to adhere to his present slovenly practice. But he is not a solitary illustration of the “penny-wise and pound-foolish” agriculturists that our great and prosperous State furnishes. You cannot traverse the country, I believe, to any considerable extent, in any direction whatsoever, without meeting frequent instances of the most foolish and lavish extravagance in this respect. What can be thought of men—there are hundreds of them—who, eternally babbling about the hardship of the times, can, notwithstanding, afford to purchase mowing, reaping, threshing, winnowing and sowing machines, and even steam plows: in short all the expensive appliances of modern scientific agriculture, to no better purpose than to leave them rotting and decaying in exposed situations—even standing all through the winter in the same situation in which they were last used in the fall or summer; or, if they happen to exercise so much forethought as to bring them to the homestead, leaving them carelessly in the farm-yard to be covered over with the manure from the stables and cow-houses, or to be run over and abused by the cattle.

It seems to me that I have already trespassed too much on your scanty space, and yet have barely touched my subject. I would that some of your correspondents would endeavor to open the eyes of our farming community to the folly of their ways. Oh, how much could be preached to them of the losses they sustain through their own recklessness! of the vast amount of the material of independence and wealth they waste by their carelessness and inattention to trifling details; of the sheep lost for a half-pennyworth of tar; of the pounds of pork per annum they lose by not attending properly to the economical feeding of their hogs—by preferring to let them run at large in their fields, often to the great detriment of the growing crops, rather than inconvenience themselves by providing them with suitable pens in which they could be better fed at one-half the expense—of the almost

infinite waste of the elements of human food annually suffered by allowing the hogs to contract contagious and fatal diseases, rather than go to the trouble of adopting a course of treatment that would effectually prevent it, or of providing proper remedies when attacked; of the quantities of beef, milk and butter annually lost, that in this vast country of ours are incalculable in their immensity, by suffering cattle to roam at large through the fields in our severe winter season, dependent on the chance tufts of withered grass or the bitter and unwholesome foliage of a few trees, when they should be comfortably housed to shelter them from the rigor of the climate and abundantly supplied with the various productions of the field, such as beets, carrots, parsnips, turnips, mangel wurzel, cabbages, hay, straw, &c. for which their increased utility would amply compensate. On this subject much more could be said.

I cannot conclude without a word on the cultivation of wheat. I do not know that I have ever seen it look better at this season in this neighborhood than at present, and yet it is more the effect of fortuitous circumstances, the accidental combination of a fall favorable for early sowing, with a mild winter, a genial spring and a generous soil, than of skilful management. It has, from time immemorial been the practice in this district, and as you well know elsewhere, to plant wheat after wheat, or as in some few cases to alternate wheat with corn, year after year *ad infinitum*; plowing the ground to the depth of only three or four inches: and I am sorry to say that this practice still prevails to a most deplorable extent. I can conceive of no practice more pernicious than that of skimming over the surface of the soil in a hurry in order that a large crop may be got in quickly; and I am satisfied that if it is out-done by any of the evil habits of our farmers it is only by that other one of scourging the land with a number of exhausting crops through successive years, thus draining the soil of all its fertilizing properties. This is all wrong, and I hope that the day is fast approaching when we shall see men anxious to cultivate well rather than extensively. It will be a great epoch in the history of agriculture, when men shall have learnt that it will be to their advantage to plow the ground to the depth of nine or ten inches; yea, even to incur the expense of sub-soiling, and to adopt a judicious rotation of crops suited to the peculiarities of soil, situation and climate, rather than to persevere in their present slovenly and improvident mode; and I hope that some one of

your correspondents, competent to do so, or yourself, Mr. Editor, will favor us with some well-arranged system of rotating crops. I believe that if the subject were handled in anything like a masterly manner, that a great number might be induced to experiment with a view to test its utility; and this is all that would be necessary, for to my mind it is as clear as an axiom in geometry that no practical farmer could resist the testimony to its manifold advantages, which a few years of patient application of the principle would supply. AN EGYPTIAN.

DISEASES OF PLANTS.

NUMBER TWO.

Smut is a disease extremely frequent in cultivated grain. It consists of a conversion of the farina of the grain, together with the integuments, and even part of the husk or pericarp, into a black root-like powder. If the injured head is struck with the finger, the powder will be dispersed like a cloud of black smoke; and if a portion of the powder is wet by a drop of water, and put under the microscope, it will be found to consist of millions of minute and transparent globules which seem to be composed of a clear and glairy fluid encompassed by a thin membrane.

This disease does not affect the whole body of the crop, but the smutted ears are sometimes very numerous dispersed through it. Some have attributed it to the soil in which the grain is sown, to the manure, or to the contamination of the seed. This latter is the most likely cause, as it has been regarded as originating in a small fungus plant which multiplies and extends till it occupies the whole head. As a proof that the minute seeds of this fungus may attach themselves to the grain, it is found that washing the seed with a solution of arsenic or sulphate of copper, or other mineral substances, of such strength as to destroy the vegetating power of the parasitic plant but not the germ of the grain itself, will effectually prevent the recurrence of smut.

A modification of this disease usually seizes on the heads of wheat, and is called by the farmer smut-ball. In this case, the cotyledons only are converted into a black mass, while the enveloping membranes remain sound. The head is not much altered in its external appearance, and the diseased grain contained in it will even bear the operation of threshing; and thus the fungi mingle with the bulk, and of course tend to propagate the same disease if the grain be used for seed.

Mildew consists in a thin, whitish coating with which the leaves of vegetables are sometimes covered, causing their decay and death, and of consequence an interruption of the functions of the plant. According to some writers it is occasioned either by the growth of an exceedingly minute fungus, the *mucoresaphe* of Linnæus, or by a sort of whitish slime which a species of aphid or plant louse deposits upon the leaves. Soot is said to prevent the occurrence.

Honey-dew is a sweet and clammy substance which coagulates on the surface of the leaves during hot weather, particularly on the leaves of the oak tree and the beech; and is regarded by some as the excrement of the plant louse, while others look on it as an exudation of the juices of the plant. The leaves of the beech tree, on the occurrence of an unfavorable wind, become covered with a glutinous coating similar in flavor to the fluid obtained from the trunk, and in every respect resembling the honey-dew of other plants. Saccharine exudations are frequently found on the leaves of many plants, though not always distinguished by the name of honey-dew, which term should be applied only when the exudation is in such excess as to cause disease: for, if it is to be applied to all saccharine exudations whatever, these must be included under the term honey-dew—the saccharine exudation observed on the orange tree by De la Hire, together with that on the lime tree, which is more glutinous; and of the poplar, which is more resinous; as also that of the *cistus creticus*, from which the gum resin labdanum is collected by means of beating the shrub with leathern thongs; and of the manna, which exudes from the ash tree of Italy and the larch of France. It is also possible that the exudation of excrement constituting honey-dew may occasionally occur without producing disease, for if it should happen to be washed off soon after by rains or heavy dews, then the leaves will not suffer.

CHEAP ROOFING FOR HOUSES.—Take coal-tar, 800 pounds; hydraulic lime, 150 pounds; ochre, 75 pounds, and whiting, 40 pounds. Mix these substances together thoroughly, and they will make a sufficient quantity of cement to cover 1,000 square feet of roofing. It should be laid down upon strong cotton sheeting nailed to the roof boards, and on the top of all a coat of sand or gravel is to be laid and pressed firmly down. The cost of such roofing is about \$2.30 for ten square feet. It answers very well for sheds and other out-houses.

[Written for the Valley Farmer.].

PHILOSOPHY FOR FARMERS.

BY DR. JOHN T. HODGEN, OF ST. LOUIS.

[Continued from May No.]

The usual amount of water exhaled from the lungs of man in one year, is 525 pounds; from the skin, 912 pounds; from both the lungs and skin, 1,437 pounds; carbon exhaled by the lungs in one year, 182 pounds; oxygen taken by the lungs in one year, 800. See page 246 *Transactions A. M. A.*

The amount of water required annually for circulation through the textures, for distribution of nutritive materials, and the removal of waste and useless materials from the billion of human beings on the earth, has been estimated at 1,500 billions of pounds, annually, whilst 30,000 billion pounds are required to accomplish similar offices in the animal kingdom; and the vegetable domain requires at the lowest calculation annually 4,644 billion tons of water. The atmosphere is a mechanical admixture of twenty-one parts of oxygen and seventy-nine parts of nitrogen—elements, which, if chemically united in the proper proportions, would form nitric acid or aquafortis—a compound so fearfully destructive of every texture, both animal and vegetable, that were we immersed in it as we are in the atmosphere, instantaneous death would be the result.

But in addition to the oxygen and nitrogen of the atmosphere, we have also carbonic acid and ammonia among its component parts. So that, really, atmospheric air is made up of 21 parts of oxygen and 79 of nitrogen, with variable proportions of carbonic acid and ammonia as furnished by the decomposition of animal and vegetable matter, the respiration of animals, and the various combustive processes going on—whether it be the action of those huge fires that occupy the earth's centre, whose chimneys are called *volcanoes*, or the burning of a lucifer match, stricken to gratify juvenile curiosity in watching the curling cloud as it mingles almost insensibly with the surrounding air.

The proportion of carbonic acid may be stated at one part in twenty-five hundred, by bulk, but varying in different localities. On the shores of lakes and seas it is less, and it becomes still less as we pass further from the land. It is less over a wet than over a dry soil; less after than before a rain. This diminution in the presence of water is owing to the fact that water absorbs it and of course robs the atmosphere of its excess. There is also less by day

than at night, and this may be attributed to the fact that in the presence of sun-light plants absorb it, and at night they give it off.

The relative quantity of ammonia in the air, also varies in different localities. When vegetable and animal matters are decomposing, ammonia is evolved, and of course the quantity in that immediate neighborhood is increased. Before a fall of rain or snow it is more abundant, because they both absorb it and thus clear the air of it.

Atmospheric air also holds in solution a quantity of watery vapor varying from one-half, to one and a half per cent. in temperate regions. The quantity of vapor in the atmosphere varies with the season, with the climate, the altitude and with the distance from the Equator.

What, now, are the uses of this all-pervading ether, the atmospheric air? *First:* It is the agent for transporting water from one part of the globe to another. *Second:* It is the great equalizer of temperature. *Third:* It is the right arm of inter-continental commerce. *Fourth:* From it plants and animals draw an important part of their support, and into it they pour the useless parts of their wearing and worn-out structures.

In answering the inquiry as to how the wind can distribute water over the earth, I must premise by saying that the capacity of air for holding water suspended, is found to vary with the temperature; that a cubic foot of air, at 80° or 100° Fahrenheit, will hold 15 or 20 grains of water; whilst at 32°, it will suspend only 2 grains; and at zero only one grain will be required to saturate it. So that the point of saturation, or the dew-point, varies greatly. If the quantity of water contained in the air be great, the dew-point will be high; if the quantity be small, the dew-point will be correspondingly low.

The constant tendency of air is to perfect saturation; and if the air is not saturated when it comes in contact with water in any form, as ice, as liquid water, as steam, as sap in the leaves and branches of trees, or in the blades of grass, or as an element of blood in the vessels and tissues of animals, either living or dead; the tendency is to quench its thirst by lapping up from every pool, from every field covered with snow, or lake bound in the cold embrace of Winter's icy manacles, or from the gushing streams of liquid life as they course through the tissues of the plant or the animal, the water necessary to saturate it at whatever temperature it may chance to be at that particular moment.

Taking the fact just stated in connection with the fact that the air is constantly in motion around the globe, now moving through the high latitudes, and again compassing the equatorial region; always changing its temperature, and consequently either growing more thirsty with increasing warmth, or weeping with the cold of a greater altitude or higher latitude—we must know that in the ice-bound region of the North Pole the last drop of moisture is wrung from the air, and it is hurried back, freezing cold, as an upper current, until it meets at the tropic of the Crab some upper current that has swept the South Torrid Zone, and is loaded with vapor; the mingled, and now equalizing currents descend with their showering moisture, and with this previously acquired momentum cross each other, becoming surface winds. The North wind drinks the waters of the North Torrid Zone, as it sweeps the region of vertical suns in its passage toward the Equator—whilst the South wind passing farther and farther toward the North along the surface of the North Temperate Zone, is robbed of its water by the increasing cold.

As the altitude is increased, even within the tropics, the mercury constantly indicates a depression of temperature; so that a mountain resting with its base on the torrid plane, may stretch its towering head so far into the thin air of the upper region as to reach the abiding place of perpetual snows; and thus present, from varying altitude alone, as affected through the changing density of the air and within a few miles of each other—First, The broad-leaved vegetation, and the blood-thirsty animals of the Torrid Zone—followed, in a more elevated plane, by the temperate region, with all the excesses of heat well tempered down; and above this again, but gradually shading upwards, the barren waste and wintry desolation of the cloud-penetrating peak.

On the sides of Chimborazo, at an altitude of less than 5,000 feet, is the region of palms and bananas; at 10,000, Indian corn, wheat and oats, with the oak and the pine are found; at 15,000 feet, is the region for the growth of barley and the more hardy grasses; and above 25,000, stern winter has eternal rule.

Large sums of money have been offered for the discovery of some means by which meat and vegetables may be kept fresh in hot weather and in hot climates, and many good minds have for several years been occupied in this province, and with the most encouraging results; for now both meats and vegetables may

be preserved for almost any desirable time as fresh and as pure as when first slaughtered or gathered from the fields.

Now, if we will turn our attention for a moment, to the eastern slope of the Rocky Mountains, from the Yellow Stone to the Rio Grande, we will find Nature's plan in detail for the preservation of meats. Lieutenant Maury has informed us and confirmed its truth by the most ample evidences, that all the rains of the Mississippi Valley find their springs in the South Pacific Ocean, and are borne by the South-West currents over the coast and rocky ranges; and of course as they ascend, to pass the first elevation, saturated at a high temperature, they weep from cold, and abundant showers flood the western slope. Then passing on, and down the eastern slope they reach a region less cold; and here the degree of saturation is such that the skies of the great American Desert never weep; and animals dying there give up their fluids immediately to the thirsty winds, and there they lie, as undecomposed forms, until chill winter wrings with frigid hands the arid air, and thus furnishes moisture enough to effect decomposition.

Thus it is that an all-wise Providence has not only surrounded us with a rich, almost exhaustless profusion of comforts and luxuries, but has also given us models, which, if we but imitate them, will furnish us with countless blessings.

POTATO PLANTING.

For the main crop of potatoes, the best time for planting in this climate, is the middle of June. We know that the generally received opinion is that they should be planted early.—We have planted many years at both seasons, and when a crop is to be kept over winter, we decidedly prefer to plant in June. The late rains of summer generally insure a crop, and as they mature at a much later period, and in cool weather, they keep better.

The potatoes should be cut a couple of weeks before being planted, as a coating of starchy matter will form over the wounds and prevent the seed from decaying in case of wet weather after planting.

The seed should be dropped in the furrow immediately after it is made, while the earth is cool. The potatoes should also be covered as speedily as possible before the sun burns the potatoes or dries up the moisture from the furrow. As soon as the potatoes begin to sprout, go over the field with the harrow reversed—the

upper part of the teeth protruding a couple of inches. By this means the weeds are destroyed, and the plants will speedily appear, and get the start of the weeds.

ORIGIN OF THE PRAIRIES.

It must be an interesting subject of thought and speculation with the farmer as he traverses the broad prairies with his plow, turning up the rich vegetable mold, and which may be traced three or four feet in depth, as to the origin of this immense garden of unsurpassed richness. Perhaps there are no spots on any other portions of the globe that correspond in character with the American prairies. There is no equal extent of territory of similar richness where there is so small a proportion of waste or untillable land. And when we consider the peculiar character of these broad, fertile tracts, and the general absence of trees, except upon the ridges and streams, it is not strange that it should excite our wonder and lead us to enquire how these prairies were formed?

Various theories have been presented as the solution of this question, and to account for the absence of trees in the prairie regions. By some of the most profound minds some of these theories are not admitted as satisfactory. Hall and Whitney, in the *Geology of Iowa*, Vol. I., give a report tending to show that the extreme fineness of the particles of which the soil is made up, is the predominating cause of this peculiar condition of the vegetation, and some facts are stated to confirm this theory. Reasoning from analogy of the smaller prairies to the thickly wooded region of the upper peninsula of Michigan, it is inferred that the whole region now occupied by the prairies of the North-West was once an immense lake, in whose basin sediment of an almost palpable fineness gradually accumulated, under conditions, the description of which is postponed to another volume, in which the drift phenomena of the North-West will be taken up; that this basin was drained by the elevation of the whole region, but, at first so slowly, that the finer particles of the superficial deposits were not washed away, but allowed to remain where they were originally deposited. After the more elevated portions of the former prairies had been laid bare, the drainage became concentrated into narrow channels, and the current thus produced, aided perhaps by a more rapid rise of the region, acquired sufficient velocity to wear down through the finer material on the surface, wash away a

portion of it altogether, and mix the rest so effectually with the underlying drift materials, or with abraded fragments of the rock in place, so as to give rise to a different character of soil in the valleys from that of the elevated land. This valley soil, being much less homogeneous in its composition, and containing a larger proportion of coarse materials than that of the uplands, seems to have been adapted to the growth of forest vegetation; and in consequence of this, we find such localities covered with an abundant growth of timber.

Wherever there has been a variation from the usual conditions of the soil on the prairies or in the river bottoms, there is a corresponding change in the character of the vegetation. Thus, on the prairies we sometimes meet with ridges of coarse material, apparently deposits of drift, on which, from some local cause, there has never been an accumulation of fine sediment; in such localities we invariably find a growth of timber. This is the origin of the groves scattered over the prairies, for whose isolated position and peculiar circumstances of growth we are unable to account in any other way.

CLOVER HAY.

Good clover hay is a scarce article; yet, in fine weather, it is as easy to have it bright and fine as it is to have it black and unfit to feed to animals. Clover hay properly cured is as good as Timothy; and indeed animals prefer it, particularly for a change. Clover is coming every year into more extensive use, owing to its fertilizing effects upon land; and as the country becomes older, and the land more worn, the necessity of its culture will be still greater.

But most farmers think that a good article of hay cannot be made from clover, and but little consequently is cut for hay. If our readers take our advice, and the weather proves favorable, we will insure them good hay from clover. It should be cut just as the blossom is leaving the heads, and they are beginning to turn. The clover cut in the forepart of the day should be put in small cocks before night, and that cut in the afterpart of the day should be put in cocks the following morning, before it has become dry and crisp, so that the leaves will not break off. If the weather is fine, let it stand in cocks a couple of days. Before hauling to the barn they should be turned over, and the clover spread sufficiently for the moisture to escape. Stir it as little as possible, as the leaves are very brittle and will readily drop off.

Clover should not be put in stacks, if possible to avoid it, as it will not shed rain. If stacked, it should be covered with hay, straw, or plank. Some method of ventilating it in the stack, or even if put in a barn, is important. A few poles standing up in the centre of the stack, is a good plan to adopt for the escape of the heated air. Clover hay put up in large quantities together, unless in the very best order, is liable to suffer from excessive fermentation, and therefore it should be guarded against by scattering in different parts of the barn, as much as possible, or by ventilating the stack as we have suggested. The finest weather should be selected for cutting this crop, for it is more liable to injury from rain than almost any other.

History of Agriculture and Gardening.

[Continued from May No.]

The Chinampas, or floating gardens of Mexico, are justly considered objects of the greatest curiosity. The invention of these gardens is said to have arisen out of the extraordinary situation in which the Aztecs were placed on the conquest of their country by the Tepanecan nation, when they were confined in great numbers to the small islands on the lake, and were driven to exercise all manner of ingenuity in order to provide a sufficiency of food for their sustenance. Humboldt conjectures that the first idea of these floating gardens may have been suggested by Nature herself, seeing that "on the marshy banks of the lakes Zochimilco and Chalco the agitated waters in the time of the great floods carry away pieces of earth covered with herbs and bound together with roots. The first Chinampas were mostly fragments of ground artificially joined together and cultivated." Following up this suggestion it would not be difficult by means of wicker-work formed with marine plants, and a sub-stratum of bushes combined with tenaceous earth or clay, to construct similar gardens of adequate dimensions. Upon these was placed fine black mold, sufficiently deep for the sustenance of the plants which it was desired to raise. The form usually given to these Chinampas was quadrangular, and their size varied from 150 to 300 feet in length, with a breadth of from 20 to 70 feet.

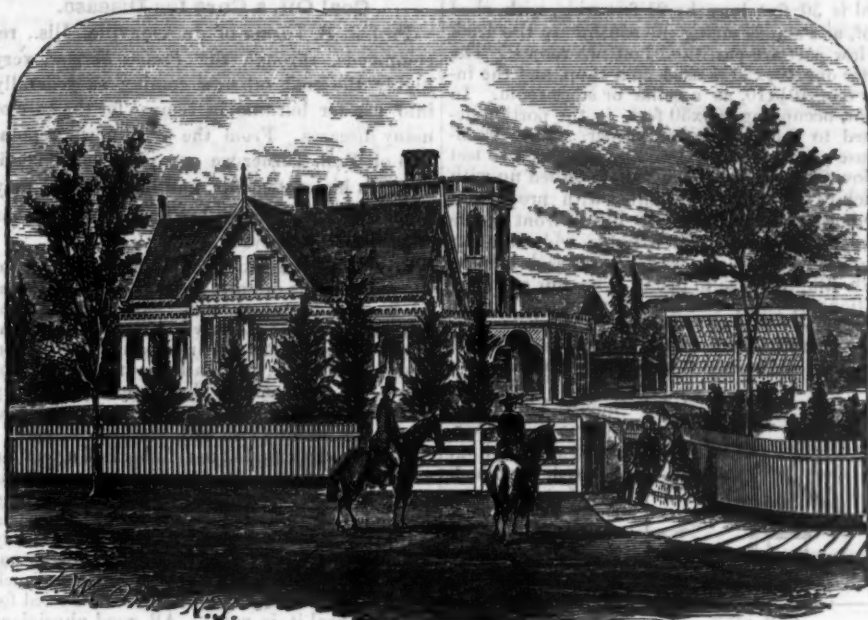
At first the use of these floating gardens was confined to the growth of maize and other objects of absolute necessity; but in the progress of time, and when the Mexicans had shaken off the yoke which rendered this restricted appropriation necessary, the owners of the Chi-

nampas applied themselves to the production of vegetable luxuries, and grew fruits, and flowers, and odoriferous plants which were used for the embellishment of their temples and the recreation of their nobles. Daily at sunrise, according to the Abbe Clavigero, were seen to arrive at the city of Mexico innumerable boats loaded with various kinds of flowers and herbs, the produce of these floating islands. The garden is sometimes seen to contain the cottage of the Indian who is employed to guard a contiguous group of gardens; and on each one there is commonly erected a small hut under which the cultivator can shelter himself from storms or from the intense heat of the sun. If it is wished to place the garden in a different place, this is easily effected by means of long poles, or by rowers placed in a boat to which the garden is fastened. In the driest seasons the Chinampas are always productive, and it is not difficult to renew the powers of the soil by means of mud taken from the bottom of the lake and which is highly fertilizing. One of the most agreeable recreations afforded to the citizens of Mexico is that of proceeding in small boats in the evening among these gardens, the vegetation upon which is always in a state of luxuriance.

Floating gardens are maintained also on some of the rivers and canals in China, where an excessive population produces the same effect as that just mentioned as having resulted from the oppression exercised upon the Aztecs by their Tepanecan conquerors; and the inhabitants are obliged to have recourse to every expedient for increasing the means of subsistence.

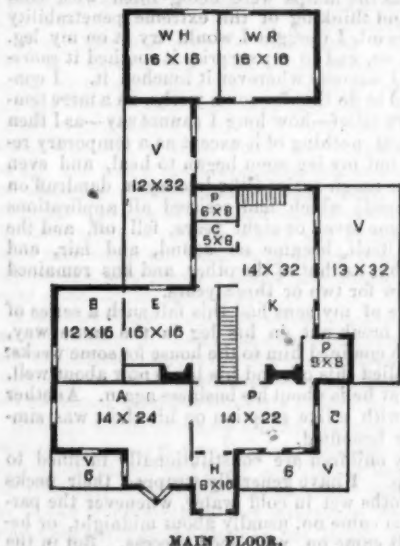
THE CULTURE OF MILLET.—Those who do not expect to raise a supply of hay for home consumption, should by all means sow millet. If it is cut at the right time, which is before the seed is ripe and while in the milky state, and carefully cured, it will make sweet and nutritious hay equal to the best Timothy. Its yield will be nearly double that of Timothy. It can be sown from this time till the middle of July; though the sooner it is sown the better. From two to three pecks of seed should be sown to the acre. The ground should be well prepared as for other crops. Stock will eat millet when properly cured as readily as they will the best Timothy, and it is considered equally nutritious.

PAINT FOR OUT-DOOR WORK.—To a quantity of charcoal, add a quantity of litharge as a drier, to be well levigated with linseed oil, and when used to be thinned with good boiled linseed oil. The above forms a good black paint, and by adding yellow ochre, an excellent green is produced, which is preferable to the bright green frequently used on out-of-door work, as it does not fade with the sun.



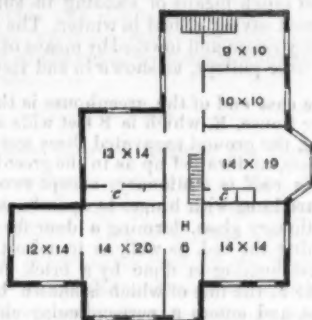
A COUNTRY RESIDENCE.

The accompanying elevation and plans will give the reader a very good idea of the residence of John A. Nichols, Esq. with a view of his greenhouse contiguous thereto.



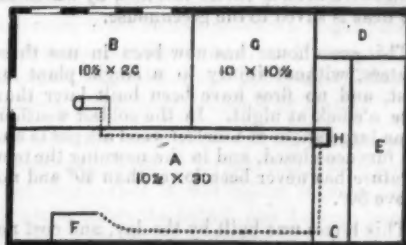
MAIN FLOOR.

In the plan of the main floor, the hall is shown at H, the parlor at A, dining room at D, kitchen at K, family room at E, with bed-room B off from it. P, P, represents pantries, C closet, W H, wood-house, W R, wash-room, V, V, V, V, verandahs. Other parts will be readily understood in connection.



SECOND FLOOR.

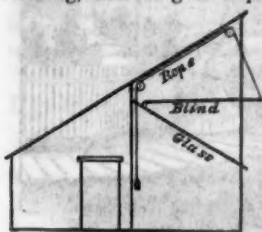
The second floor, as shown in the plan, is conveniently divided by the hall, on each side of which are conveniently arranged parlors, sleeping apartments, and closets, with stairways to attic and observatory. Over the large parlor, 14x19, is another room of same size, the whole forming a very neat and convenient residence.



PLAN OF GREENHOUSE.

The building in which the greenhouse is situ-

ated is 30 feet long by 21 feet wide, with shed roof, and stands facing the south. In the back or low part are partitioned off two rooms. The outer one, 10½x20 is used as a shop, and the inner one, 10½x10, as a cellar or store room. In front, occupying 10½x30 feet, is the portion devoted to the greenhouse proper. The greenhouse portion of the building is sunk two feet below the surface of the ground, walled up with brick to the surface, and filled with proper soil for border, &c. The house has in front twelve perpendicular sash, three lights wide and four high, of 8x10 glass. Every other sash is hung with hinges, so as to open. The top sash are stationary, same size glass, and all of double thickness. The novel part of the structure is the roof and blinds. The roof covers the whole building, extending to a plumb line with the



END VIEW.

front of the greenhouse. The blinds, twelve in number, are made of siding, dressed, matched, and fastened upon three cleats, and hung with strong hinges at the upper or back end. These, when let down, make a complete covering for the glass roofing, making an easy and quick means of shading in summer, and a great saving of fuel in winter. The blinds are readily raised and lowered by means of a cord passing over pulleys, as shown in end view.

At the east end of the greenhouse is the propagating house, E, which is 8 feet wide and 21 feet long, the ground excavated three feet below the surface, and walled up as in the greenhouse. The glass roof is stationary, except two sash, which are hung with hinges to open back upon the stationary glass, forming a door for filling or cleaning the bed, as well as to admit fresh air. The heating is done by a brick furnace placed at F, the flue of which is shown by dotted lines, and enters a perpendicular chimney in the propagating house at C. This flue continues from the top of chimney at C, over the door leading from the greenhouse to the propagating house, and enters the main chimney at H. There is also another brick flue, as shown by dotted lines, at the back of the greenhouse, which enters the chimney about six feet above the floor of the greenhouse at H. The pipe from stove in shop enters this flue, by which all the heat is saved to the greenhouse.

This greenhouse has now been in use three winters, without injury to a single plant by frost, and no fires have been built later than nine o'clock at night. In the coldest weather, some large sticks of four feet wood are put in and the furnace closed, and in the morning the temperature has never been lower than 40° and not above 50°.

This house was built by the day, and cost not far from \$300, and answers every purpose of a more costly structure.

Coal Oil, a Cure for Disease.

Prof. J. B. Turner of Jacksonville, Ills., recommends, through the *Prairie Farmer*, very highly the coal oil now coming so generally into use for burning in lamps, for the cure of many diseases. From the well known reputation of Prof. Turner we can place entire confidence in his statements, and hope the oil may prove as efficacious with every one as it has with him. He says:

Soon after the introduction of Coal Oil from the recent wells or springs in the East, I learned its extreme penetrability, surpassing that of any other substance known to me. For example, it will soften an old dried paint-brush, when nothing else will; take all the rust off from plows, or old irons, so that it easily rubs up with the finger; or loosen old rusty nuts and screws, as nothing else will.

Now it happens that my father had a terrible scrofulous leg for more than sixty years of his life, which no medical art could heal; and long before his death at eighty-eight years, it was a sight terrible to behold. Several of his family inherited the taint, which at times breaks out and troubles them. About ten years ago such a sore appeared on my own ankle. I tried for years to heal it, in vain. All good physicians told me "it must have its own way." But advised me when it assumed the form of terrible itching, to wash it in cold water, merely to soothe it for the time. This I did with some little temporary relief. One night I was doing this as the lamps were being filled with coal oil, and thinking of the extreme penetrability of this oil, I thought I would try it on my leg. I did so, and to my surprise it soothed it *entirely* and *instantly* wherever it touched it. I continued to do this for some weeks, as a mere temporary relief—how long I cannot say—as I then thought nothing of it except as a temporary relief; but my leg soon began to heal, and even all the rough scales (like leprosy or dandruff on the head) which had resisted all applications for some seven or eight years, fell off, and the skin itself became as sound, and fair, and healthy, as that of the other, and has remained so now for two or three years.

One of my sons had this fall such a series of sores break out on his leg in the same way, which confined him to the house for some weeks. I applied this oil, and his leg is now about well, so that he is about his business again. Another son with a like eruption on his chest was similarly benefited.

My children are constitutionally inclined to croup. I have generally wrapped their necks in cloths wet in cold water, whenever the paroxysm came on, usually about midnight, or before it came on, with good success. But in the last case I rubbed the throat of the child in this oil, smartly, with seemingly almost instantaneous relief. I have applied it for the past two or three years for about every local disease (in our family and among our neighbors and personal friends), such as rheumatism, pains in the side, shoulders, back and joints, croup, sore throat,

bruises, strains, cuts and lacerations of all sorts on men and animals, with almost uniform success; and as some doctors always prescribe calomel even for a broken leg, so now as a doctor of both medicine and divinity, by my own inherent right by gift of Almighty God, I always prescribe coal oils for all human ails and sins whatever—always to be applied and used as follows: for all pains of the body apply the coal oil directly to the parts, and rub it in well, and all unpleasant smell will soon be gone—for all sins and pains of the soul pour the oil into a good lamp, and light it, and sit down and read the New Testament, and rub its truth well into the conscience by resolving to do whatever Christ commands. And thus this simple coal oil is worth more to both the bodies and souls of laboring and simple-hearted men, than all the nostrums and creeds that both of the two learned Faculties of Doctors have ever concocted or prescribed, so far as I know; and if it is not a sovereign medicine for soul and body, as well as for old nuts, bolts, irons, plows, and paint-brushes, it is as near to it as I can come.

Recently our girl was afflicted with a chronic *tic-douloureux* in the face, giving her excruciating pain, often forbidding sleep even after hard work. A few applications, after she came to live with us, heated in by the fire, entirely relieved her. A favorite horse, which was strained in the cords of his fore-legs below the knee, and which all around here had tried to cure for some years past, was cured apparently by a few applications. In speaking of this matter and relating these facts to a few gentlemen last week, one of whom is a learned and philosophical physician, said that it then occurred to him that this oil is in fact, in all probability, precisely identical with the celebrated "Rock Oil," or "British Oil," which his father used on all sorts of animals and men with so much success thirty years ago; and two other gentlemen remembered well this celebrated oil, which was then sold for about one dollar per ounce, and had a most wonderful run as a patent medicine. And probably this same coal oil forms now one of the chief ingredients in all the most effective oils, liniments and embrocations, advertised and lauded in all our country papers, and sold for one dollar per ounce, instead of one dollar per gallon.

And why should not this oil be highly remedial?—even to the extent of repelling croup and rheumatics, and even the much dreaded Diphtheria, or other tendencies to local disease? Let us reason upon the matter a little.

Now the virtue of nearly all our best external embrocations rests in two simple points, namely, their penetrability and their stimulating essential vegetable oils, held in the solution. But in the power of penetrating any substance whatever, even through the flesh to the bones, any one can satisfy himself that this oil surpasses all other known substances that are equally harmless in all cases; and as regards the stringent and aromatic oils that are in it, if geology gives us the true account of its formation, it must embody in itself the most potent of all the essential oils of the entire old forests, out

of which the coal was made—macerated in the best of all crucibles, the crucible of nature for thousands of years. And if an ordinary penetrating oil, with some single essential oil combined, by the crude art of man, should prove to have a healing power, why not this most penetrating of all oils, combined with the essential oils of a whole forest in the great crucible of nature, and by the skill of the Infinite God? So reasoning, I, at least, thought it worth trying; and trying it I have not been disappointed thus far, though the extremely limited experience detailed above is of course quite too narrow a basis on the ground of which to rest any general truth, or any very confident assertion; but I have told, in fact, simply what I know. It may be all merely accidental; and others may try it with no good effect, either because it is not suited to their case or because they have not applied it with sufficient thoroughness, and time, and patience, to admit of the possibility of curing any old and chronic disease, which in the nature of things, must often, if not always, take months if not years of time for the needful changes to be wrought. But considering what a vast amount of money our people pay out for liniments, &c., that are at least only the same thing disguised, or probably not one half as good, for either man or animals, I thought it would be well for me to state, even at this early and (as cautious men will say) premature moment, what I have observed and experienced, and encourage others to do the same, and report the result, and thus at last we shall get at the truth, by mutual frankness and mutual aid.

When Should Wheat Be Cut?

This is an important inquiry. Most farmers think it must be ripe before the reaper or cradle enters the field. This is a great mistake. A great deal is lost, every year, by too long deferring to cut grain. Many thoroughly-tried experiments have been made with grain cut at different stages of maturity, and they have unanimously resulted in a greater yield when grain is cut in a soft or doughy state. The straw just below the head should have turned somewhat yellow, but the lower part of the stalk should still be green.

All kinds of grain when cut in this state will weigh more to the bushel, produce a larger yield to the same quantity of land, and wheat will make more and better flour. The straw is more nutritious, and is better relished by stock.

We hope the incredulous will try our recommendation, particularly for oats and wheat, and we feel certain that it will induce them to cut their grain before the kernel has become hard and dry and the straw yellow, as is now generally the case.



Importance of Salt to Animals.

Professor Johnston gives the following very conclusive reasons why salt is essential to the health of animals: The wild buffalo frequents the salt licks of North-Western America; the wild animals in the central parts of South Africa are a sure prey to the hunter who conceals himself behind a salt spring; and our domestic cattle run peacefully to the hand that offers them a taste of this delicious luxury. From time immemorial it has been known that without salt man would miserably perish; and among horrible punishments, entailing certain death, that of feeding culprits on saltless food is said to have prevailed in barbarous times. Maggots and corruption are spoken of by ancient writers as the distressing symptoms which saltless food engenders; but no ancient or unchemical modern could explain how such sufferings arose. Now we know why the animal craves salt—why it suffers discomfort, and why it ultimately falls into disease if salt is for a time withheld. Upward of half the saline matter of the blood (57 per cent.) consists of common salt, and as this is partially discharged every day through the skin and kidneys, the necessity of continued supplies of it to the healthy body becomes sufficiently obvious. The bile, also, contains soda as a special indispensable constituent, and so do all the cartilages of the body. Stint the supply of salt, therefore, and neither will the bile be able properly to assist the digestion, nor allow the cartilages to be built up again as fast as they naturally waste.

ABORTION IN COWS.—"The sympathy of a breeding herd is one of the most interesting subjects for discussion. I have known instances of a whole herd becoming 'infected' with casting their calves, and serious loss has followed for several years, scarcely any of the cows going to the end of their time without this taking place. I have always found the best remedy to be, to remove any cow that shows the slightest symptoms of this affection, and hide it from the rest; for, if they are allowed inspection, or opportunity for sympathy to

act, it is certain to spread. This infirmity is not considered to be influenced solely by the season; it occurs usually, in the first instance, from accidental causes, and it is only when allowed to spread, that it becomes serious in its results; much, however, may be done by proper management and diet to prevent its entrance into a herd; still more, to hinder its prevailing to such an extent as, if uncontrolled, it may be expected to reach."—WRIGHT.

DISEASES OF HORSES.

Edward Mayhew, an eminent veterinarian, and the author of the *Illustrated Horse Doctor*, recently published in London, briefly sums up the causes, symptoms, and treatment of some of the principal diseases to which horses are subject:

CRIB BITING.—Cause—Sameness of food, and unhealthy stables, or indigestion.

Symptoms.—Placing their upper incisors against some support, and, with some effort, emitting a small portion of gas.

Treatment.—Place a lump of rock salt in the manger; if that is not successful, add a lump of chalk. Then damp the food and sprinkle magnesia upon it, and mingle a handful of ground oak bark with each feed of corn. Purify the ventilation of the stables before these remedies are applied.

FARCY.—Cause—Excessive labor, poor feed, and bad lodging, operating upon old age.

Symptoms.—It is at first, inflammation of the superficial absorbents. Lumps appear on various parts. If these lumps are opened, healthy matter is released; but the place soon becomes a foul ulcer, from which bunches of fungoid granulations sprout. From the lumps may be traced little cords leading to other swellings.—The appetite fails, or else it is voracious. Matter may be squeezed through the skin. Thirst is torturing. At length glanders break forth and the animal dies.

There is a smaller kind of farcy, called button farcy—the smaller sort is the more virulent of the two.

There is no known cure for the disease.

HIDE BOUND.—Cause—Neglect, or turning in to a straw or stable yard for the winter.

Treatment.—Liberal food, clean lodgings, soft bed, healthy exercise and good grooming. Administer daily two drinks composed of—liquor arsenicalis, half an ounce; tincture of muriate of iron, one ounce; water, one pint. Mix, and give as one dose.

ROARING.—Cause—The bearing rein; the folly of fashion.

Symptoms.—A noise made at each inspiration.

Treatment.—No remedy. The cabman's pad is the only alleviation; that conceals but does not cure the disease.

RING BONE.—Cause—Dragging heavy loads up steep hills.

Symptoms.—A roughness of hair on the pastern and a bulging forth of the hoof; a want of power to flex the pastern; an inability to bring the sole to the ground, only upon an even surface; loss of power, and injury to utility.

Treatment—In the first stages apply poultices, with one dram of camphor and opium. Afterwards rub with iodine of lead, one ounce; simple ointment, eight ounces. Continue treatment for a fortnight, and after all active symptoms have subsided, allow liberal food and rest; work gently when labor is resumed.

Charcoal for Hogs.

Full twenty years ago it was recommended by correspondents of the *Telegraph* to feed charcoal to hogs, especially during the period of fattening for slaughter; and if we remember rightly, large pieces were suggested to be thrown into the pens, in order that they might help themselves whenever so disposed, in the same way that lumps of rock salt are placed in the mangers of the horse-stable. We find the following sensible remarks on the subject, in a publication where it is printed anonymously, and fully believe in the statements and queries of the writer:

The well known Mr. Mechi, of Tiptree Hall, has discovered that "pigs are very fond of coal ashes or cinders," and that "they can hardly be fattened on boarded floors without giving them a moderate supply daily, or occasionally." In the absence of coal ashes, he would give "burned clay or brick-dust." He would "leave to science to explain the cause of this want." Probably many farmers have noticed that hogs which are kept in close pens, and fed on very nutritious food, have an appetite for carbonaceous matter, particularly for charcoal. If they cannot get this, they will eat decayed wood, straw or hay, peaty earth, stone-coal or coal ashes. Even poultry of all kinds, while confined and fed with grain, will eat considerable charcoal, if put into such condition that they can swallow it. Those who have observed the effect of charcoal on these animals, know that it promotes their health and thrift. Precisely how it does this is not so easy to explain, fully, though something may be safely assumed. Among the human race, charcoal is sometimes taken with good effect by dyspeptic people, especially for the correction of acids in the stomach. Is it not probable that this substance produces a similar effect on the lower animals? Another advantage may be the distention of the intestines, which are liable to become too contracted, and sluggish in their action, when the animal is fed wholly on concentrated food. But if farmers will give their hogs charcoal, which in most parts of the country can be readily obtained, they need not trouble themselves to get stone-coal cinders or brick-dust for them.

SALT FOR SWINE.—A correspondent of the *Annalen der Landwirtschaft* states some interesting experiments to test the use of salt in fattening swine. He selected two pairs of barrow hogs weighing 200 pounds apiece. One pair received with their daily allowance of food two ounces of salt; the other pair, similarly fed, none. In the course of a week it was easily seen that the salted pair had a much stronger

appetite than the others, and after a fortnight the salt was increased to two ounces apiece. After four months the weight of the salted hogs was 350 pounds apiece, while that of the unsalted, five weeks later, reached only 300 pounds. This experiment was repeated with almost precisely the same results. The author feeds young pigs, according to their age, a quarter to one ounce daily, breeding sows very little during pregnancy, and during the heat of summer withholds it in a great degree from all, as it induces thirst, and liability to disease.

CHEESE MAKING FROM A SMALL DAIRY.

It is customary for those farmers who have but a small number of cows, and make dairying merely an incidental business, to change from butter to cheese making, during the warmest weather. Although in this way but a few cheeses can be made, it is important that they should be made well. Hence a few hints to beginners—and those of experience, too—may not be amiss. The first care should be to see that the rennet is properly preserved and prepared, as the quality of the cheese depends very much upon the rennet used.

PREPARING RENNET.—The calf should be allowed to stand several hours after sucking before being killed. The rennet should be carefully removed, the curd taken out, and skin or stomach turned wrong side out; the specks of dirt removed by picking from the skin and curd, if there is any; but by no means rinse the skin, as that removes a portion of the mucus in a free state, which is the only active principle of any value contained in the rennet. Put the curd into the skin, add a pint of fine salt, and more if the rennet is a very large one. The whole should be placed in a cloth bag, and hung up in a cool, dry place till wanted for use. Old Rennets are considered better than new, as being stronger. When wanted for use, soak the rennet in warm water two or three days, strain off the liquor, add as much salt as will dissolve, keep in a cool place. This process must be repeated once or twice before the whole strength will be extracted.

In the manufacture of cheese it is important to have the rooms and utensils sweet and clean. Next to this comes the necessity of keeping the milk sweet. If the milk or curd becomes "changed," or begins to ferment before putting in the press, the cheese will be very likely strong.

The milk, after it has been strained into the tub, should be warmed to a proper temperature which is about 90° Fah., or nearly as warm as when taken from the cow—by adding a portion of heated milk. If the milk gets too warm the cheese will be hard. The rennet is then added, the milk well stirred, and left till the curd has come. The quantity of rennet depends upon its quality, as well as upon the quality and temperature of the milk. It is difficult to determine the exact amount. The richer the milk is in cream and cheese, the greater must be the quan-

tity of rennet; therefore more is required in summer than in winter. The warmer the milk the less the rennet. Experience is the only guide in this operation.

The time necessary to produce perfect coagulation is from thirty to sixty minutes. Better exceed sixty minutes than to get in too much rennet. It is much better to get in too little than too much; and should the milk not curd within a proper time, it requires only an addition of weak rennet to effect a perfect coagulation. As a general thing, the longer it is coming the tender and sweeter will be the curd.

When the curd is formed sufficiently, it is broken up quite fine, either by hand or curd breaker made for the purpose, which cuts it into very small pieces. The whey is then separated from the curd by passing through a strainer previously placed in the cheese basket. The curd is then placed in a strong cloth, and well pressed to remove the whey. It is then put in a cool place, and the operation repeated till there is curd enough to make a cheese the desired size.

When the right quantity is obtained, the curd is broken up very fine in water, heated sufficiently to make the curd quite warm, when ready for the press. The object of thus warming is to make the different curds unite readily, or as it is termed, "close" well. When the scalding is completed, drain off the water as dry as possible, and keep the curd broke up fine, so as to the better mingle with the salt. Care should be taken not to mash the curd so violently at any time as to start the white whey, as that detracts from the richness of the cheese at once.

When the curd is drained sufficiently, add salt at the rate of one pound to every thirty of dry curd. After the salt has been thoroughly incorporated, a strainer sufficiently large to cover the whole cheese is placed in the hoop, into which the curd is put. The pressure should be moderate at first, increasing gradually for two or three hours. The cheese is then taken from the press, turned, and a dry cloth put around it. Place it again in the press and subject it to a powerful impression thirty-six hours, turning once or twice, and apply fresh cloths. To protect from the flies, cover with cotton cloth dipped in melted butter, and afterwards grease them thoroughly. They should be turned every day, and the mold, if any, rubbed off, occasionally applying a little more grease, until the surface becomes smooth, when turning once in two or three days will do.

PASTURING—It is poor economy to feed pastures very close. They will yield more, if the grass has a fair start, than if fed down so low that it can scarcely grow. Cattle which pick a pasture down to the bone, nearly always run largely to bone. John Johnston supposes a case founded on repeated observation, in illustration of this truth. He says: "A. has a field which he thinks will keep twenty cattle, and he puts them into it. B. has a field of the same size and quality, but he puts only ten cattle into it.

Now it will almost always be found that in autumn, the ten have gained as many, often more pounds live weight, than the twenty. The ten with first rate pasture should gain 400 pounds each, and it is doubtful if the twenty would have gained 200 pounds each. The ten would make extra beef, and bring an extra price, while the twenty would make only third-rate beef, bringing little more per pound than they were worth when they were turned to pasture. The ten paid \$25 each for their pasture, or perhaps more. This I have often seen."

BUTTER MAKING IN NEW YORK.

We find in the last volume of the Transactions of the New York State Agricultural Society, many contributions and statements of interest, some of which having reference to the products of the Dairy, we herewith annex. They will show farmers elsewhere the result of labors in butter making in a sister State, which has a high reputation for its firkin butter, at least.

It is proper to say, that these statements are attested with affidavits.

HIRAM OLMSTEAD'S BUTTER DAIRY.

Statement of a dairy kept by Hiram Olmstead, during the year 1859:

The whole number of cows milked, from which butter has been made the past season, has been twelve from five to thirteen years old, and two three years old, and one two years old; making fifteen in all, old and young. The cows came in between the middle of March and the first of June, and are of the native breed, except one grade Durham and three grade Devons. They have been wintered on hay and straw.—No grain has been fed, but each cow has had about eight quarts of roots during that part of the winter that they were milked.

| | |
|--|----------|
| Butter sold in New York, 2728 lbs. | \$602.38 |
| Consumed in family and remaining unsold, 517 lbs. at 21 cts. | 108.50 |
| Value of milk fed to hogs, after deducting other feed, | 96.00 |
| Value of milk fed to calves, | 9.00 |
| Thirteen deacon skins, at 87½ cts. | 11.37 |

Total income, \$827.32

Less packages, . . . \$24.38

Salt, . . . 2.08

Freight, cartage, and commissions, 33.16

59.54

Net income from all sources, \$767.78

Whole amount of butter made, 3,245 pounds. Average to each cow after deducting for heifers, 229 pounds. Net income from each cow, after deducting for heifers, \$54.19. The butter sold for a fraction over twenty-two cents per pound, it being two cents less than the dairy has sold for in six or eight years.

A deduction of one-third for two year olds, and one-fourth for three year olds, is made in the statement above. HIRAM OLMSTEAD.

Walton, Delaware County.

EDWARD HOYT'S BUTTER DAIRY.

My dairy consisted of six native cows; two of them were seven years old, one six, one five, and two three year old heifers, and calved between the 10th and 26th of March. The said cows were wintered on hay, with a few roots; after they came in they received one pint of corn and oat meal each, per day, till grass; during the summer, their feed was grass only.

The butter, except what was consumed in the family, was sold in New York.

QUANTITY.

The whole amount of butter made from these six cows, the past year, was 1,230 lbs. being an average on each of the six cows, of 205 lbs. to each cow; or if one-quarter be deducted for each of the two three-year old heifers, then the average quantity on five and a half cows, would be 223 7-11 lbs. to each cow.

INCOME.

| | |
|---|----------|
| Whole amount of butter sold, 1085 lbs. amounting to, | \$230.61 |
| Whole amount of butter used in family, 145 lbs. amounting to, | 30.45 |
| New and skim milk fed to calves and colt brought up by hand, | 18.50 |
| Milk and cream used in family, | 10.50 |
| Pork made from the slop of the dairy, | 30.50 |
| One veal, | 5.50 |
| Three deacon skins, sold at eighty cents, | 2.40 |
| | \$328.46 |
| Less expenses of salt, firkins, freight, and commission, | 20.26 |

Net proceeds of the dairy, \$308.20
 Or, an average on each of the six cows, of \$51.37; or if one-fourth be deducted for the two heifers, the average on five and a half cows would be \$56.04 to the cow. EDWARD HOYT.
 Walton, Feb. 4th, 1860.

The manner in which the butter in the above statement was manufactured:

My cows are milked regularly each day at a stated period; each cow is milked by the same hand, and the milk is drawn as quickly as is consistent with the quiet and comfort of the cow; the milk is strained into large pans, about two inches deep, and set in a cool buttery, till it sours or begins to lopper; the cream is then taken off, and the churning is usually done each morning, with a dash churn attached to a tread-wheel, propelled by sheep power; the cream is tempered by a thermometer, at about 62 to 64 degrees; the butter is cleared of the butter-milk by washing in cold water, then salted, by judgment, with Ashton salt, to suit the market, probably at the rate of about one ounce to the pound, and well worked in; allowed to stand in a cool cellar till the next day; it is again worked and packed down solid in the firkin, and when full, covered with a clean cloth, and the chime filled with fine salt and brine, and kept full till ready for market; but care should be taken that no part of the cloth hangs over the edge of the firkin, to act as a siphon to conduct off the brine and soil the package; cover the firkin with a smooth and clean flat stone, and

keep in a cool, dry cellar, where there is not too much air, and the work is done.

EDWARD HOYT.

Walton, Delaware County, N.Y. Feb. 4, 1860.

The Care of Harness.

Leather is seldom injured by being wet if hung up to dry, instead of being left in a mass on the floor or in a corner, where the drying is so slow as to create mold. For general use harness should be fairly oiled, and for this purpose either pure neats'-foot oil should be used, or the article known by the curries as "daubing;" and this should be rubbed in while the leather is moist, but not wet. The harness should be wrapped in a wet cloth one day before the application of "daubing" or neats'-foot oil; this should be rubbed on smartly with a brush for a sufficient length of time to insure its entrance into the leather, rather than leave it upon its immediate surface. If the leather be positively dry, this substance cannot enter, and therefore the necessity of its being moist and pliant at the time of application. Varnish should never be applied; it fills pores, and prevents the necessary access of air, causing the leather to become crisp and rigid, and in a short space of time it is rendered tender, causing it to crack, break, &c. Before applying any oil substance to leather, all dirt should be thoroughly removed from its surface, and no other material than lampblack should ever be mixed with oil where it is necessary to blacken the leather. Shoe blacking is sometimes used, and always with injurious effect; it frequently contains sulphuric acid, which, when brought in contact with leather, rapidly destroys it. Where the leather is very dry, as with boots and shoes, the injury is not so great. Vegetable oils should never be applied to harness of any kind, for after a while they harden the leather and destroy its usefulness. Leather curtains should never be varnished, but always kept perfectly pliant by very moderate and frequent application of the oils we have named.

The Horse's Age by the Teeth.

The following information as to the age of the horse indicated by the teeth, we have taken from one of our agricultural exchanges, without the ability now to say which—we think the *Country Gentleman*. It will guide some in their examinations.

Yearlings and two-year-olds are alike in mouth, and must be judged by general appearance. At three years old, the horse has four *horse-teeth*, two above and two below, in front of the mouth, which supply the place of the *sucking-teeth*. At four, he has eight *horse-teeth*, four above and four below, the corner being only sucking teeth. At five years old these are gone, and the *mouth is up*, at least, with the exception of the *inside of the backmost*, which, especially in mares, sometimes do not rise until the sixth year; that is, all the teeth are *horse-teeth*, and the tusk is up on each side of the mouth. A dark mark, or hollow, is generally

observable in all the teeth of the bottom jaw at five years old; and the tusks are concave in their inner surface. At six, the two middle teeth have quite lost their mark, and the tusk is higher up, and longer, and not so concave. At seven, the next two teeth have lost it, and the corner teeth only have the mark left in them. At eight, it has grown out of these, and no mark is left at all. The tusks also become longer, and instead of being concave in the inner surface, become convex; the horse is then termed aged. There is, however, a great deal of difference in the mouths; some have lost their mark in all except the corner teeth, even as early as five years old; others have their front teeth in the top jaw, projecting over the bottom teeth at the same age. You may form some idea of the age from the appearance of the mouth in general, when the marks are no longer visible. If the corner teeth do not appear long and running forward, as it were, to the front of the mouth; if they retain their square shape, and shut well together; if the tusks are blunt, and have the least concavity in their inner surface, you may conclude that the horse is not very old, particularly, if his head be not grey, and not very hollow above the eyes; though this latter shape sometimes exists in young horses. A concave tusk is the most certain criterion of youth; and as mares have no tusk at all, they must be judged with reference to what I have said about the corner teeth, except in some cases of what is called "shell teeth," from their resemblance to the plate-like cakes of shells, and horses with these preserve the appearance of youth till ten or twelve years old. It is here proper to mention, that the difficulty of acquiring accurate knowledge of the age of horses by their teeth is very much increased by the tricks that are practised.

CHESTER COUNTY PIGS.

An Illinois subscriber in the last number of the *Country Gentleman*, makes inquiry of those acquainted with the Chester county breed of pigs, what would be thought of a cross between a full blood Suffolk boar, and "the largest sows of the neighborhood," and whether this would not make "good Chesters?"

Whether such a cross would result in good animals at all, depends very much on the character of these "largest sows." One thing is very certain, they would not make good Chesters.

The Chester county breed of hogs may now be fairly considered a *distinct breed*, having certain well defined peculiarities of form, color, hair, habit and constitution, which in selections among the best families, are pretty sure to be continued down in their offspring. This is evidence always of a distinct breed. With mongrels or crosses, where peculiarities have not been long established, and may be considered accidental, the progeny is uncertain in character. Some years ago I purchased a farm near West Chester, Chester county, formerly owned by Capt. James Jeffries, who erected the buildings and resided on it for a time. In one of his voyages between Liverpool and Philadelphia, he brought home a pair of Bedfordshire hogs,

which are generally considered to be the origin of what is now called the Chester county breed. By careful and judicious crossing with our best native stock of the county, continued for a period of now twenty-five or thirty years, their peculiar excellencies and differences from all other breeds may be said to be fully confirmed and established. These are—pure white color, thin skin, length and depth of carcass, small head and other offal parts, width and depth over the shoulders, disposition to fatten at any age, and to attain great size. For food consumed, they are believed to return weight equal to any other breed. They are also well larded inside, making them emphatically the farmer's hog, and are also kind and docile in temper, making excellent nurses.

Several were killed last fall weighing 700 to 800 lbs., and they have reached over 900 lbs., making a pound of meat per day till they were killed. I have sent them to nearly every State in the Union, and in no case yet have had the least complaint of want of entire satisfaction.

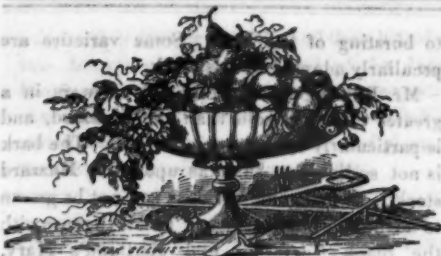
Great care is, however, required in the selections, and I have had to advise some of my correspondents, that pigs from Chester county are by no means always "Chester county pigs," there being probably as many mongrels or mixtures in Chester county as elsewhere.

This fondness for crossing, recommended by "Experience" on page 204, in present volume, is a strange and most injurious habit with many of our farmers. Injudicious crossing has seriously injured the general character of American stock of all kinds. Instead of being satisfied with what has been accomplished already in distinct breeds, the wish seems to be to have something better. In England this curious propensity is almost unknown or confined to a very few, who by the aid of abundant capital, quick perception of good points, combined with extraordinary skill and judgment, in a long course of years have succeeded either in originating a distinct breed of animals or adding to and confirming new points in an old and well known breed. Colling accomplished the first with the Durhams; Bakewell, Ellman, and now Webb, have done the same with sheep.

In this country the first thought with a farmer on obtaining a fine animal is, what a fine opportunity to make a cross, which too often he injudiciously attempts, and loses by the operation the benefit of twenty-five years of skillful effort. In England breeds are kept pure, and selected with reference to the requirements of the farmer, his soil, climate and business. It should be the case here.

In a breed of swine so nearly right as the Chesters, it is easy to see how much might be lost by crossing, but difficult to understand what is to be gained. Durhams, Devons, Alderneys, Herefords, among cattle; South-Downs, Bakewells, Broad Tails, and others among sheep; Essex, Berkshire, Suffolks, Chesters among swine, have all their fixed points of character. It is utterly impossible to combine all these in one animal. The superiority of any one breed consists in having more of the desired points than another.

PASCHALL MORRIS.



HORTICULTURAL.

Fruit Growers' Society of Western New York.

Among the members of this Society are some of the most intelligent and the most successful fruit growers that are to be found in the United States. The most intelligent, and hence the most successful, because they are situated in the best fruit-growing region in the country, and the business has become a most important one. This Society holds its annual and semi-annual meetings generally in the city of Rochester, N. Y., where an interchange of facts and ideas take place in the discussion of all the most important matters relating to the business of fruit growing. At their annual meeting in January last, some very interesting and valuable facts were introduced for discussion, and which are of such general importance to fruit growers everywhere that we are induced to furnish to our readers some of the most valuable portions of them:

PRUNING AT THE TIME OF TRANSPLANTING.

Mr. L. Barber said—In taking up trees, we should take up all the roots we can. Such roots as are marred should be examined, and the injured parts should be cut away. When the roots are pruned clean, there are more small roots thrown out from the pruned roots than from roots left unpruned. The top should be pruned to correspond. The top of the tree is the demand and the root is the supply. The top can be so severely pruned as not to leave wood buds enough to draw up the sap from the roots.

Mr. Hooker said—There is a wonderful recuperative power in nature; and fruit trees have a strong power to adapt themselves to circumstances. He had tried experiments, and the growth of those that were pruned was greater than of those not pruned; but the total top was only about the same. There are various ends to be served by pruning. If we want the plants to bear fruit immediately, we prune one way; we prune in another style to produce

a bushy tree, and in another to produce a pyramidal tree.

Mr. Herendeen stated, that John J. Thomas once tried the experiment of three different modes of pruning the tops upon the same sort of tree, leaving the roots all alike, and all growing under similar circumstances. In the first case, they were not pruned in at all, and the trees made very little if any growth. In the second case, the tops were pruned moderately, and the trees grew somewhat, sending out shoots some five or six inches in length, and looked decidedly better. In the third case, the tops were pruned severely, and the trees grew very thriftily.

Mr. Barry recommended that the tops should in all cases be reduced a good deal at the time of planting. When we receive trees from France, as they usually reach us with their tops more or less shrivelled, we always prune them severely. The late A. J. Downing pressed the importance of this matter upon planters. Small trees require less pruning than large ones, but in all cases dead and injured limbs and roots should be removed.

Mr. Barber—The roots should be placed in the earth, not in wads or bundles, but spread out as nearly as possible as they were when growing, and any decayed portion, or dry or dead part of either root or branch, should be removed under all circumstances.

Mr. Sharpe said he once had a great number of peach trees one year from the bud, and the tops being so dry he feared they would not live, he cut them down, leaving only stumps from ten to twenty inches above ground. They all lived and made the finest trees he had.

INFLUENCE OF STOCK UPON GRAFT.

What influence has stock upon the graft in modifying or changing the quality of the fruit?

H. E. Hooker—I think this a very important question, and I beg the attention of gentlemen who propagate trees, to it. We often observe the same varieties of apples growing upon different trees having a different flavor. Mr. H. thought the character of the stock would show itself in the fruit.

Mr. Barber said many farmers believed that grafting an acid apple upon a sweet tree would improve the flavor of the fruit.

H. N. Longworth had a specimen of Bell-flower on exhibition, which he believed to be very much modified by being grown upon a sweet tree.

Mr. Vick thought this a question which needed careful investigation, and mere surmises

should not be advanced. He therefore moved that this question be postponed to the next meeting, which was carried.

DWARF AND STANDARD TREES.

What is understood by the term a standard, and what by the term dwarf tree?

Mr. Townsend said, on this subject there seems to be a great misapprehension among tree planters. A standard tree is one grafted or budded on a similar stock, so that the tree grows full or standard size. A dwarf comes from a bud inserted in a root with which it will unite, but yet furnish an interruption to the flow of sap, generally a sort of smaller growth, which induces early fruitfulness and a small growth of tree.

Mr. Hooker thought the term dwarfing was applied to the working of the scion upon a stock which tended to produce diminutive growth, and thus tended to fruitfulness and to increased size of fruit. In the pear this effect is produced by working upon the quince stock. There are other terms, and which result from other causes, as, for instance, a tree of any size may be rendered "pyramidal" by suitable pruning. In the pear we call a standard tree one which is worked upon the pear stock or standard stock. As applied to apples, the working upon Paradise stock induces a diminutive growth. In the cherry, working upon the Mahaleb induces a growth not so much dwarfish; and I think there is some impropriety in the use of the term applied to the cherry on this stock. In the plum, the working on the wild plum stock produces a tree somewhat dwarfish. A tree which is simply pruned low, is not thereby rendered a dwarf tree, because such pruning does not produce diminutive growth.

Mr. Ellwanger said a tree that is not allowed to branch near the ground, but has a clean stem for some four feet is called a standard. One that has a clean stem for some two feet is called a half standard. This is the French system. If a pear tree on quince root is pruned up to a clean stem three or four feet, it is called a dwarf standard. But a standard tree without qualification means a tree on its own stock pruned up with a clean stem the usual height.

BEST STOCK FOR THE CHERRY.

What is the best stock for the cherry, for general purposes—the Mazzard or the Mahaleb?

Mr. W. P. Townsend thought the wood of the Mahaleb stock is more dense and hardy than the Mazzard, and the tree is not so subject

to bursting of the bark. Some varieties are peculiarly adapted to this stock.

Mr. Ellwanger—The Mahaleb answers in a greater variety of soils than the Mazzard, and is particularly adapted to a clay soil. The bark is not so liable to burst as upon the Mazzard stock. In fact some varieties can not be grown to advantage on that stock. This is the case with the Black Tartarian and Kirtland's Mary. When worked low the bud will not out-grow the stock. Grown in this manner they stand the winters well. The cherry should be pruned and got into shape when it is young, and not be pruned afterwards. The tree when young, makes a vigorous growth on Mahaleb stock, but after three years old the growth is slower, and the tree is not so large.

Mr. Charles Downing said there is a tree in my neighborhood on the Mahaleb stock eighteen to twenty inches in diameter, forty years planted. This stock is no doubt better adapted to the South and West than the Mazzard.

[To be continued.]

THE DOUBLE ZINNIA.

The Zinnia Elegans, in its many varieties, is one of the most familiar as it is one of the most showy annuals. For years it has been extensively cultivated, but without any other change than the addition of some new tint, which, in its sportive character, has been obtained in common with other plants. No appearance of anything like a double flower has ever been seen till recently. Messrs. Vilmorin, the great French florists, state that all their attempts to produce a double variety have been unsuccessful. Yet the past year, magnificent specimens of double Zinnias have been exhibited in London, both from English and French cultivators, which attracted unusual attention, and were of so much merit as to elicit awards of first-class certificates from the Floral Committee of the London Horticultural Society.

Singular as it may appear, these double Zinnias are of Eastern origin, the seeds having been first received from the East Indies by M. Grazani, of Bragnères, France, and subsequently by Messrs. Carter of London. Messrs. Vilmorin saw them with M. Grazani in 1858, and now for the first time are introduced to the public. How they came to India is at present unknown; but they are a great acquisition; "not a whit less interesting than that of double Dahlias" is admitted even by Dr. Lindley.

The Zinnias are easily produced from seed, and retain their double character. Under good

culture they are very double, and their introduction to our gardens, with that of the Japan Pinka, marks a new era in their decorative character as distinctive as that of the Dahlia, which has so long been the pride and glory of the autumnal garden.—[Hovey's Mag.]

[Written for the Valley Farmer.]

Calendar of Operations in the Vineyard.

BY GEORGE RUSMANN.

JUNE.

If your work has been done well and thoroughly in May, there will not be so much to do this month. Give the suckers the last pinching back, as already directed in May; you can also pinch back the laterals or suckers on the young canes, to one leaf, it will give a freer circulation of air. Pinch off the tendrils when soft and green, about an inch from the canes, it will prevent tangling of the vines.

Keep the ground clean, if the season is wet; hoe very shallow, only scraping off the weeds; if dry, hoe somewhat deeper, and keep the ground mellow around the vines.

Attend to tying the young shoots, and when they reach the top of the trellis, lead them along on the upper lath; they will thus serve as a protection of the grapes against hail and rain, and not obstruct circulation of air through the bearing canes.

Fill up around the layers to the depth of about one to two inches, with well pulverized soil. Look to the grafts; see that they are well sprouted, and securely tied. Do all this in fine, dry weather, and you have done about all which can be done for your vines this month.

[Written for the Valley Farmer.]

Monthly Notes for the Garden and Orchard.

BY CAREW SANDERS.

The certainty of an abundant crop of fruits of all kinds throughout this section of the Great West, is now placed beyond a contingency or a doubt, and almost before this reaches our readers the first fruit of the season (the strawberry crop) will have reached its culmination.

The gorgeous crops of this choice fruit the present season, will doubtless have the effect to stimulate the resolves of the owners to have more of them another year. Where this is decided on, take care to give the runners every chance to perfect themselves, by providing good rich soil for them to run into, and by thinning out the weaker ones that may rob and impoverish the rest.

Keep the ground frequently hoed, so as to keep it loose, and all weeds down. In newly made plantations, let the runners spread and root moderately thin over the ground, and next season the very best results will be obtained therefrom.

In the case of old beds or plantations that have become matted together, choked up with weeds, &c., and where a new planting has been neglected to be made, we recommend to dig under everything except a narrow strip, where the row is, which should be left to fill up the fresh ground with new plants; this should be done immediately after fruiting, and will be almost equal to a new planting—although we should always prefer and adopt the latter, and resort to the renovation of the old bed only when the making of a new one had been entirely omitted.

This season will give thousands of persons an opportunity to test the difference between choice varieties of "Budded" Peaches and common seedlings, and we think there will be few who will be willing to give up the melting, juicy and rich flavored named varieties, for the small, tough, juiceless, and almost flavorless seedlings, especially when it is remembered that its being a seedling does not make it any hardier than a budded variety; or, in other words, a bud taken from a hardy variety, and inserted in a proper stock, will be as hardy as its parent tree, whether that be a seedling or not. So a seed taken from a hardy variety, whether a seedling or a perpetuated variety of several generations, and planted, the progeny will be as hardy as its parent, subject always to the slight sports or variations which nature produces, which are exceptions and not rules: so that all we have to do is to select known hardy varieties of good qualities and bud from them in order to obtain choice fruit; and this is in effect what the nurseryman is doing.

As many varieties of the peach are this year overloaded with their burden of fruit, we would advise amateurs who desire to develop the best qualities of the different varieties, to thin out the fruit by taking off one-half or two-thirds as soon as they have stoned; the remainder will probably make up in weight what you have removed, and certainly surpasses them in size and excellence. This thinning process is indeed highly beneficial in all the large fruits—apples, pears, &c. and though we could hardly expect it to be adopted in large orchards, yet in the small garden of the amateur, where the choicest fruits for family use only are desired, it could and should be practiced by the proprietor himself as a pleasant pastime that will pay.

In the Kitchen Garden, the principal sowings for general crops may be considered as past, but there are many kinds of seed which may be sown this month yet, and the gardener should ascertain the success of his former plantings in order to make up any deficiencies from failures before the season be too far advanced.

By this time some of the early crops will be cleared off, and such ground as was manured for the early crops of Lettuce, Radishes, Spinach, &c. will be excellent for late Beets and Carrots. Where it is desirable to make the most of the ground, much of it can easily be double cropped—thus: Cucumbers, Melons, Tomatoes, Winter Cabbage, Celery, late Corn and late Potatoes, and many others, may all be preceded by another crop, such as all the early Salads and Greens, early Peas, Potatoes, Onions, &c.

In market gardens, near large cities, where rents are high, one crop is planted and often half grown by the time another is taken off: and thus three, and even four, are taken off in a single season in our latitude: but this can only be done by high and skilful culture, ground full of manure, constantly worked, and no weeds allowed.

Hoe and thin out all standing crops, and clean vacant ground to prevent weeds running to seed. If the ground be dry, frequent hoeing will be beneficial. Keep Asparagus beds clear of weeds, until after the cutting is over, and it is thick enough to smother them by its own growth. It is an old rule not to cut Asparagus after early peas come in; we do not regard it as applicable invariably, but certainly after that time cutting Asparagus should diminish in frequency and severity.

GRAFTING THE GRAPE.—The grape monopolists are just now being exercised at the rapid progress which grape grafting is making. They argue in long articles, published for them as usual gratuitously, that the policy is a bad one; that grapes which are grafted are not so long lived, and all that. They see in this lately introduced mode to propagate the best grapes on common or worthless stocks, the beginning of the end of their monopoly, hence the whole pack joins in one general howl.

The truth is, the grape can be grafted with as much certainty as the cherry, plum, apple or pear, and just in the same way, except that the operation has to be performed as low down as possible, and the whole then lightly covered up with soil. It can be performed, too, any time in March or April, like other grafting. There is not the least secret about it. Therefore, those who have old grape vines of any kind, can graft them with the best varieties, provided the grafts can be procured. For the Delaware grape especially, which is so slow of growth, and

never ought to be allowed to grow upon its own roots, grafting is particularly adapted, and we trust it will be resorted to generally by those who desire fruit early, as well as to save expense.—[*Germentown Telegraph*.]

[Written for the Valley Farmer.]

Prospects of a Grape Crop. Another year with the New Varieties.

HERMANN, May 9, 1861.

EDITOR VALLEY FARMER:—Never has the prospect for a fine grape crop looked more cheering than this spring. The mild winter, and the extremely favorable weather this spring, made the buds break more regular and evenly, and show more fruit than it has ever been my good fortune to see before. As the grape fever is almost as prevalent as the war fever now-a-days (and it should by right be more so), and everybody seems to be anxious to hear how this or that new variety will turn out, I have thought of giving short notes on them, this being my second season's acquaintance with them bearing on our Missouri soil. This does not, of course, include the Norton's Virginia, Herbemont, and Concord; these are "fixed facts" with us, and any one who doubts them, is considered a heretic in grapeology with us. They look better and better the older they get with us, and are constantly growing in favor.

Delaware—This I think will also soon be a fixed fact with us. Hardy, a moderate but healthy grower, immensely productive, and fruit the very climax of excellence; it needs but to be seen to be appreciated. Who would think of planting Catawba or Isabella, when he can get something so vastly superior? It would be like planting seedling apples, when plenty of choice grafted trees can be had.

Cassady—This grape is, comparatively, but little known, not half as much as it ought to be. An immense grower, the most productive vine I ever saw, of very inviting color, creamy white, turning to pale yellow when fully ripe, of honeyed sweetness, and a very agreeable flavor; apparently not liable to any disease—if these are not good qualities enough to recommend it, your readers must be hard to please indeed. My oldest vine has now, the third summer from graft, 117 bunches, and will ripen them, too, to all appearance. This grape will, I think, make a superior white wine, a class of wines we need very much. Some of my grafts of last summer show the same number of bunches.

Cynthiana, or Red River—Very similar to Norton's Virginia, of the same character, but hav-

ing larger bunches and berries; the latter more juicy. It is very productive, and will, I think, prove a very dangerous rival to the Norton, being, as the printers have it, an enlarged, revised and corrected edition of it. Promises to be very valuable.

Diana—Sets abundance of fruit, and is a very strong grower; fruit of excellent quality, but whether it is more free from disease than its parent, the Catawba, time alone will show. Last summer was not a fair test in that respect. Promises well so far.

Northern Muscadine—Whoever does not object to a pretty strong aroma, vulgarly called foxy, will be well pleased with this grape. It is immensely productive, hardy, vigorous and healthy, and the berries are very sweet, bunches and berries of fair size. Promises an enormous crop of fruit this season.

Hartford Prolific—Another grape, which everybody ought to have, were it only for its great productiveness and extreme earliness. The berries are said to drop from the bunch at the East, but hung on well here last summer. It is a fair sized bunch and berry, of good quality, and ripens a month before the Catawba. Promises very well.

Garrigue—Belongs to the Isabella class, but is better in quality, and ripens more regular. Very productive, and to be preferred to the old Isabella, as it also seems more healthy and vigorous.

This will do for the present. I may give your readers another dose of the new grapes, from time to time, should they have any relish for them.

GEORGE HUMANN.

GERMAN CHINA ASTERS.

An English authority thus describes this beautiful class of plants; and as they are easily raised from seed, and make a glorious display in beds or masses, in our climate and soil, we think a description of them at this season will not be out of place, especially as the seeds of these choice varieties can be obtained of some of our own seedsmen, who import them direct.

Truffaut Pyramidal Aster—This indicates the great care and perseverance the grower has taken in rearing it. There are now five varieties of it, viz: *Fleur Perfection*; the blossoms of this kind are unusually large; petals long and but slightly reflexed; height from two to two and a half feet. *Fleur Bombie*: the flowers of this variety are very large and full, and form almost half a ball, height two to two and a

half feet. *Fleur Chrysanthime*: the blooms of this are not as large as the preceding; the petals are entirely reflexed; height two feet. *Fleur Pivonie*: the Peony flowered Asters turn their petals toward the centre, and a flower not quite in full bloom resembles a ball; height one and a half to two feet; produces but few side flowers. *Fleur Imbrique*: the petals of these overlap each other exactly like slates, one on the top of the other to the centre of the flower; the *Pomponne* produces smaller blooms, but of such beauty that they resemble a perfect half ball, and, being dwarf, look well planted in front of taller kinds.

Quilled Aster—The individual petals of the ordinary blossoms consist wholly of tubes or quills, and the exterior crosses only are blossom petals, which are slightly reflexed; it is from one to two feet high, branches freely, and throws out many large blossoms.

Turkish Aster—This much resembles the quilled, but it grows only to a height of one to one and a half feet, has many branches, and the flowers are smaller than the preceding.

Dwarf Aster—The individual portions of the blossom-tuber are partly tube-like, and partly leaf-like; it reaches a height of six inches to one foot, and is richly covered with moderately sized flowers; principally used for edging.

Globe Aster—The principal flowers of this Aster are very large, and so arched that they may be compared to a half ball; most are quilled; height two to two and a half feet.

Pyramidal Aster—The beautiful large flowers appear on this nearly all of one height; it produces very few side flowers; most probably it received its name because it resembles an inverted pyramid; some blossoms are quilled and others not; height from two to three feet.

Bouquet Aster—This deserves its name, for each individual plant is so richly covered with bloom that the green of the foliage is scarcely visible; almost every plant forms itself into a perfect bouquet; height from three-quarters to one and a quarter feet; highly ornamental in pots; blooms for a long time.

Besides the above there are many other kinds or classes of Asters, all of which are extremely beautiful. But as almost every one is acquainted with the old "China Asters," we need hardly say more than that the colors of the above are as varied, and as brilliant as their form and shape are perfect, embracing, as is well known, almost every color, and these of the richest imaginable hue. The Red, White, and Blue may be considered the ground colors, and

between them every shade and hue of which these primary colors are capable of producing, are to be found among them.

The best mode of culture is to sow the seed in a cold frame, some time in April, and transplant once, before the final transplanting in the beds where they are to bloom; here they should be planted about a foot apart, in a rich, deep and rather moist soil. The subsequent culture is to keep the ground clean and loose around them, and in very dry weather an occasional soaking of water should be given. The only drawback to their culture here is the fondness of a fat, black, ugly beetle for them; if these attack them, they must be attacked in return, and driven off or exterminated by killing, or they will exterminate the beauty of the Asters.

[Written for the Valley Farmer.]

Missouri State Fruit Growers' Association.

THE GRAPE—Continued from May No.
TIME AND MANNER OF PLANTING AND PREPARATION OF THE SOIL.

Mr. Husmann said it has been held as a precept in making a vineyard, that trenching was an essential, so as to throw the rich soil under to the foot roots of the vine. I believed in this till lately, and confess to having had my views considerably modified of late by the writings of "Mr. Bright on Grape Culture." This has led me to change my views on several points, and I think it will tend to lessen the labor and first cost of the vineyard very considerably. That this view is the one adopted by nature we find in the case of all our wild vines, where the surface roots run along great distances, and seem to derive their nourishment from the rich surface soil; where they are principally found not more than eighteen inches deep, and six to ten inches the most common depth. These views save much in the preparation of the soil and brings us to the manner of planting to be about six inches deep. Prepare the ground in the fall, to have the benefits of the frost; plow the ground two or three times, and plant in spring when the ground gets into good condition. The distance apart will depend much upon the varieties. The Catawba, Delaware, and other varieties not of so rampant a growth, will do 6x6 or 4x5; while the Herbemont, Norton and other rapid growers, will require 6x8.

Mr. Rommel does not entirely agree with Mr. H. in some things, he plants on hillsides much closer and much deeper; would trench the ground deeply, and put the rich soil in the bottom—tile or brush drains are good. When the ground is well prepared, set the plants 4x4 or 4x5 feet apart; he has found this close enough. He planted 5x5, and found it too wide, and laid in a plant between them. If the ground is not trenched deeply the vines do well a few years at first and then get exhausted; to make a lasting vineyard trench and plant deeply. In dry weather the deep soil and deeply set foot roots are not so easily affected as when all the roots are near the surface; and in wet weather they are not so liable to the rot, as the deep soil absorbs much of the moisture, and the deep roots are not easily reached by the wet, and the roots are not so apt to be heaved out by the frost when planted deeply as they are sure to be if only planted 6 or 8 inches deep. He has them 6x6, 5x7, 6x8, and finds for Catawba 5x8 is all they can do with, but with Herbemont and Norton 6x6 will do well.

Mr. Mason said do you like spring or fall? Mr.

Husmann prefers preparing in the fall, and planting in the spring.

Mr. Rommel—I find the best time to be April.

Mr. Husmann said he had no special theory on this. It was the result of observation—he had never seen a really good vineyard planted in the fall.

The President thought that any plants that had a tendency to be tender should not be planted in the fall. In the peach for instance he thought it was much better to heel them in during the winter and plant in spring; and the same certainly holds in the grape; probably here also a good mulching would be of great importance as protecting the roots and preventing heaving.

Mr. Mason thinks there are reasons for spring planting of the peach that do not apply to the grape, and thinks that all roots are injured by the dry air and winds of the late spring by the rapid and excessive evaporation that takes place in the planting. I have never known any one that planted in the fall that was sorry he did it, and a proper mulch prevents all the injury that is dreaded, and the plants are in the proper condition to start at the right time and make a good growth before the trying summer and fall months.

Mr. Rommel has found that in fall planting the loose ground was much frozen, and the heaving dried the roots and broke them.

Mr. Husmann—I expressed myself as never having seen a good vineyard planted in the fall. I have seen them planted from March till May, and I have found that those that were planted when the ground was warm did better than those planted in the early spring. I have seen that and the result.

Mr. Mason—Were they properly mulched?

Mr. Husmann—There was no mulching.

President Colman thought the question was, When do we find the plant in the best condition for the change that takes place in transplanting, and when do we find the conditions most favorable to the plant? If the plant is taken up early in the fall it is apt to suffer in not having all motion in the fluids of the plant terminated, and consequently the wood of the plant is not fully developed. If it is taken up late in the fall and planted out, it stands there alone for from three to five months, in the storms and changes of temperature, with the soil, perhaps, but indifferently brought into contact with the roots; and it seems to me that if taken up late in the fall, after the growth had been fully matured, and all motion in the sap had ceased, and then carefully heeled in or placed in a proper cellar till spring, the ground began to warm, and the sunshine called its vital powers into action—it thus sustained a much less check than by ordinary fall planting. This position is somewhat modified by the general character of the plant in question, some being much more hardy in themselves than others. The Catawba is of this easily injured class.

Mr. Kelly expressed himself in favor of spring planting. With cuttings it is different; planting them in fall gave them a better chance of callusing and gives them a longer time to callus, and then they start as soon as the season is proper for them to do it.

Mr. Mason planted last spring seven and a half acres, plowed with five yoke of oxen, and a Michigan plow, followed by another plow, making a depth of about eighteen to twenty inches in all; laid about eight inches of corn stalks for drainage, and purpose draining with tile three and a half to four feet deep. Norton and other free growers I planted 5x5; Catawba 6x8, and will train on trellis—a portion of the Catawbas I will graft in the spring. In regard to fall and spring planting the most serious objection that I have to spring planting is in the length of time they have to be out of the ground—the danger there is of their drying up in the planting out in the drying winds we have in spring. An essential feature in order to succeed is always to have the plants damp.

Mr. Carew Sanders finds the time of taking up is of less importance than ALLOWING THE BARK TO SHRIVEL.

If they are kept heeled in well during the winter they will do; but whether in or out of the ground when the bark is shriveled, they seldom live.

Mr. Husmann has found that cuttings callus by being kept in bundles in a damp, dark place; this was proved to my satisfaction last spring: a bundle of cuttings were overlooked at the time of the root being planted out; they had callused and thrown out small roots: I thought they would die; I put them out in a careless manner, and not more than five died out of one hundred and fifty, and this was in May; and they made a better growth, and more of them sprang than those planted out early in the spring; and this was found to be the case with the Norton—it never grew from cuttings till two seasons ago a neighbor planted out one hundred cuttings of the Norton and got eighty-five. Last season, although so very bad, he planted out three thousand and got eight hundred of the finest plants; the soil was dug loose, and was rich vegetable mold.

The President thinks it is always best to make cuttings in the fall and allow them to callus during the winter.

Mr. Kelly—I have found cuttings heat and mold in the centre of the bunch and be good on the outside; if planted out in the fall they are in the dark and should callus as well as in a cellar.

Mr. Husmann I put them always on their end in the ground and make the end of each touch the ground, the earth washes in around and they root better than when single.

Mr. Mason—Is it necessary to have the cuttings well ripened?

Mr. Husmann—In the grape it is.

Mr. Payne—Would it do to make cuttings now and bury them?

President—It would.

PRUNING AND SUBSEQUENT CULTURE.

Dr. Rommel, upon call, said that there was a difference in pruning between poles and trellis. To commence with the first year, I let them grow, only keeping them clean. The second spring I cut them down to the two last good buds, and tie the two canes up to the poles; and this spring I open up the ground round the vine and cut off the surface roots four to five inches below the surface. If I don't do this, all the growth will be in the surface roots, and the foot roots become weak. By cutting off the surface roots, the vine is not so liable to be injured by heat, drouth, moisture, or freezing, and the foot roots become much better developed, making a stronger and longer-lived vine; and if the surface roots remain, you injure them with the plow and spade in cultivation, which by impairing the quality of the juice, helps the rot. In digging a cellar, I have found the foot roots seven feet deep. This gives good sound roots all in the deep, rich soil put undermost in the trenching, and makes a strong healthy vine. According to the strength of the vine, the second or third year I leave one cane about eighteen inches, and cut the other back to two eyes.—This year I set my poles. When they commence to shoot in the spring, I break off all but two or three of the best; if many are left, they are small; on these shoots the blossoms come—three clusters to each shoot; I then pinch off the last leaf above the bunch.

Mr. Husmann—As I have taken an opposite view of preparing the soil and planting, so it may be in the after management. If I keep the rich soil to the top, and plant only eight inches deep, the next spring the management will differ from that indicated by Mr. Rommel, and begin by leaving all the surface roots. The next spring I prune the same as Mr. R. As to pruning—summer pruning is of the greatest importance; and here I remark that Mr. Bright's idea of a single cane and renewal system, struck me much. He plants the rows six feet apart, and the plants two feet apart in the rows, and has one vine to bear the one year and the other vine the next year; so as to have the vines make wood and fruit every alternate year. The old system, as stated, requires a spur to be left

for the next year's bearing wood; the single cane system needs no spur, but cuts off the bearing cane to produce wood the next year and fruit again the third year. The bearing cane is then pinched back at the last bunch, and all the laterals are stopped; this concentrates all the energies of the vine into the fruit.—In pruning he leaves two buds, for fear of accident, one of which can be removed, and only fruits one cane. Under our present management, as given by Mr. Rommel, we leave six, eight, or ten eyes, according to the strength of the vine. The treatment indicated by Mr. Rommel as to summer management, and which we have practiced for several years, is much superior to the old method of leaving four to six leaves above the last bunch. Upon this matter of summer pruning there has been considerable discussion in the horticultural papers—the practice is most reputable in Cincinnati being to leave five to six leaves above the last bunch, to draw sap to the fruit and to shade it; and they assert, that this pinching off the leaves must injure the fruit from being so near the bunch. I grant that this might be the case were the shoots fully developed, but so far from that being the case we pinch off the terminal leaves as soon as the blossoms can be distinguished. This stopping causes new leaves to push at the axilla of the clusters, which being also stopped at the second leaf causes that leaf to be very fully developed, and gives the greatest amount of shade just where wanted, that is over the cluster, and allows of the most perfect ventilation; but besides this, these axillary leaves being so much later in being pushed, and having the vigor of the growth centered in them, remain much longer on the vine than by the other method, which is essential to the size and quality of the fruit, as when the fruit is exposed it never ripens properly. The old leaves originally left on the shoot almost always drop, and leaves the bunch exposed at the time it needs shade most.

Dr. Spalding—Another circumstance in which the renewal system is better than the old one is, that young wood bears finer fruit than old wood, and this system insures the entire renewal of the wood. Is this not one of the ideas of the renewal system?

Mr. Husmann—The theory tends undoubtedly to this; but Mr. Bright seems to adopt it more from the idea of getting the greatest quantity in the smallest space.

Mr. Carew Sanders—Does the bunch and berry prove larger and better on new wood?

Dr. Spalding—It is thought it makes a better quality of wine. It has long been held that the fruit grown nearest the ground makes the richest wine.—The quality of the fruit is held to be improved.

Mr. Husmann, by particular request, again stated the difference in the two methods of summer pruning as practiced in Cincinnati and Hermann, and then proceeded to notice

DISEASES AND REMEDIES.

We are very much troubled with a grey or green worm, from a quarter to half an inch; they eat the young leaves and shoots of the vine, and sometimes the young bunches, and injure the growth and development of the whole plant very much, and sometimes cause the grapes to ripen unequally. The pinching in at the first leaf, as before intimated, aids materially in preventing mildew and rot, which almost always attack the fruit when about the size of peas; and by throwing the energies of the plant into the fruit instead of the leaf formation, causes them to develop much more rapidly, and puts them beyond danger from those diseases. This pinching in, equalizes the shade, gives a much better means of ventilation—which is another preventative and remedy against disease.

In answer to a question: Grapes cannot be grown in a healthy condition in a wet soil, so that thorough draining and deep cultivation are in some cases essential to the prevention of the rot, and would help it in every stage.

Dr. Morse stated, that he had visited the vineyard

of Mr. Massey at St. Clair. Mr. Massey had never had the rot in his vines; his soil was high, a little inclined to bake, and lying upon an open gravel base, which seemed to insure a constant and uniform drainage, as was shown by the railroad cutting through the lands; the soil seems about two and a half to three feet above this gravel, which rests upon the magnesian limestone rock, somewhat mixed with sand. His cultivation seemed very careless, little done with the plow, and the vines generally growing among the grass; twelve to fifteen vines seem very old, and are very hardy and healthy. Mr. Braches manures with leaf mold alone, and considers strong manures productive of disease.

Mr. Manwaring said the vine-growers in Hermann had almost entirely given up manure; it gives a strong growth in some instances in the early stages of the vine, but led to mildew and rot. Many used leaf mold to keep up the condition of the soil.

Mr. Pottingill asked if there had been any trouble felt here by a small black insect that attacked the young growth? I find it upon almost all the cultivated varieties of the cherry; and it is increasing on the grape.

The Secretary has observed a black aphid that answers this description.

WHICH VARIETIES?

The President remarked, that upon the question of varieties he doubted if there was much to be said after the examination by the Association last fall. [We omit remarks, and refer to the Transactions of the Hermann Meeting published in October number of the "Valley Farmer."]

THE QUINCE

Being in order, Mr. Pottingill opened by saying, he had no trouble in getting the trees, but had some considerable trouble in getting fruit. Had been accustomed in the East to see the trees loaded down with the fruit as fine and as fair as could be desired. Here it is liable to be knotted, and is subject to blight similar to the Fire Blight in the pear.

Question—What was the soil and elevations?

It was flat prairie soil. Bunker Hill is an elevation, with fine rich soil ten to twenty inches deep; was underdrained. In the same soil peaches are more liable to be winter or spring killed than on the upland in timbered country. The blight begins at the extremity of the limbs. They grow freely both in the tree and bush form—but I think the tree form most liable to blight, at least its effects are more powerfully felt from having only one stem.

Mr. Huggins, of Illinois, had tried the quince, and gets as much fruit as he would expect from the age of the trees; had noticed the blight, but had not suffered so much from it; had been troubled with the borer, and thinks the quince more liable to it than the apple; has hopes they will do well; set out 100, and thinks high, dry ground, best.

Mr. Krausnick asked if the quince had been tried by any of the members upon the pear stock?

Mr. Pottingill—It makes good crops upon the thorn.

Mr. Manwaring—With us it does well, but does not make full crops; our only trouble is with a small worm, which destroys the leaves. The quince being at a considerable distance from the house, it was not observed till almost the whole of the leaves were destroyed; they are not, however, so much cultivated among us as I think they deserve.

The President was sorry to hear such poor accounts from Illinois; he has always found it did not succeed so well in low locations, but found that it generally succeeded well here upon elevated positions, such as we find so often in our county and on the Alton bluffs. I think it one of the most profitable crops that can be raised upon high locations. Where this elevation is obtained, and proper care taken in planting, there is perhaps no more profitable crop than the quince. Mr. Wm. Glasgow thinks the quince gives large returns per acre, and Mr. F. A. Quinette finds them succeed

well, and prove a very profitable crop. I think that where the pear and the peach succeed, the quince will do so too.

Dr. Spalding thinks the quince requires a soil perhaps a little different from the peach; the situation requires to be elevated, but the soil requires to be rich—perhaps a sandy loam, with a good depth of vegetable mold would be suitable. I have known a small quince orchard where, with few exceptions, it has borne a full crop every year: it seemed a variety between the Orange and the Pear. It was certainly very fine, large, high flavored, pulpy and tender. I have two different times tried to get this variety, but failed; but have no doubt of getting it. Thinks it will do on high lands where the soil is not washed off, as it certainly does best in rich soil; have seen the leaf worm spoken of, which destroyed at least three-quarters of the leaves, and so exhausted the tree it could not ripen the fruit perfectly. The worm is large, have got them nearly as large as the finger, and gather them several times clean off during the season. It seems only injurious by its destruction of the foliage, but does not attack the limbs.

Mr. Huggins remarked, that Mr. Pottingill's experiments had reference to a special locality on the south side of Bunker Hill, Ill. He knew of some quinces on the north side of Bunker Hill that grew very well.—The quince does well upon small streams near the ocean, and perhaps salt would be good for them.

Mr. Mason had read an account of the cultivation of the quince in California. Salt had been applied to every alternate tree, and the trees blossomed and fruited, while the alternate trees without the salt, grew to the size of a cherry and fell to the ground.

Dr. Spalding asked, If it would not be found good in Illinois to bring up a portion of the sub-soil to the surface?

Mr. Pottingill would prefer bringing up sand to clay; he has put four to six inches of sand in his garden, and found it did better. The clay in the soil is so apt to crust, and the sand helps this somewhat.

Dr. Morse—in regard to the quince doing well where the peach does, I have found the roots of the peach travel far in search of nourishment, which the quince does not seem to do; and I think the quince makes rather a long tap root—I judge this from the appearance of dwarf pears.

Mr. Manwaring said, this may arise from the fact that stocks for dwarf pears were made from cuttings to a very large extent, and of the Anger variety; but the quince cultivated for its fruit, the Orange or Portugal quince had not this tendency to the same extent.

Mr. Mason, in answer to a question: The best distance is 8x10 feet, and grow in the tree form.

The President has seen a quince tree like a medium sized apple tree, and thinks the quince needs stronger soil than the peach, and might be manured with benefit.

SOAP-SUDS—*Ed. Valley Farmer*: What a great waste it is to throw away soap-suds! Not one family in a thousand applies them, as it ought, to the grape vines, fruit trees, roses or vegetables in the garden. When applied, they cause a most luxuriant growth, and the plants present a fresh, healthy appearance. The fertilizing properties of soap-suds are enormous, and those who have tried them one season will never let them be wasted afterwards. Let them be applied to the plants just after sunset. For currants, grapes, dwarf fruit trees, roses, &c. we know of nothing superior to soap-suds to induce a fine growth.

Alton, Ill.

M.



[Written for the Valley Farmer.]

Trouting, and Trout Eating in a Bachelor's Hall.

Three of us started from Southville, on a piscatory and not a piratical tramp, about seven o'clock in the morning—an April morning.—Nature had spread an umbrella of clouds over head, and the rain of the previous day had darkened and deepened the water so that we had to fish with bait instead of the fly.

Our path ran through the valley of the Otsuquaga, which is enlivened by a beautiful brook, made classical by a literary voluptuary in his contributions to our first-class magazines. He is the greatest fisher in all the country, and when he cannot catch trout, amateurs should not attempt the impossible task. He is, to all intents and purposes, a modern Isaac Walton—having his leisure, his culture, his whims and oddities, and his poetical taste. He has made himself familiar with the writings of the "Complete Angler," "Frank Forester's Fish and Fishing," and every other work on the subject worthy of notice.

This accomplished old bachelor, whom I shall call Frank, accompanied us. He carried on his right shoulder a long lithe rod, and in his left hand he bore an umbrella. Unlike his great prototype, he carried the worms he used for bait in a tin box and not in his mouth.

On our way to the trout wells, we threw in our hooks here and there, feeling the pulse of the throbbing streamlet in order to find out the prospects hid in the husk of the future; but the coming events did not cast any shadows before. A chattering, angry little saw mill had sprinkled the water with dust, and the mailed aristocracy of the stream had retired to their crystal palaces in disgust utterly refusing to look at the vulgar worms dropped so daintily before them. All experienced fishermen know that brook trout are the most sensitive and fastidious creatures that inhabit the waters. It is true they are quick and impulsive, and when in the mood

they will leap out of the water, even to bite at a fly; they are plucky, too, and will repeat their efforts to gratify their alimentatives at the risk of fiery, future punishment.

Frank said the fish would not bite, but he continued to dimple the pools with his hook, and I determined to stroll through the woods while the trout tried his patience. The brook was my companion cheering me with its smiling face and silvery laughter, and I thought I could interpret its liquid language as it ran whispering to the virgin grass upon its banks, kissing the young flowers that blushed like coy maidens, murmuring among the antiquated branches that intercepted its progress, and shouting over the rocky dams in its pathway.

Scarcely had I commenced my journey when a shout of triumph brought me back to the dam from which I started; our Walton had caught a large trout and was leading him gently along with the current to the little green island in the middle of the stream. The act was performed so delicately and so gracefully, and with so much courtesy that the most refined and sensitive of fishes need not be ruffled with a sense of humiliation; indeed any fish would be a fool not to be caught by the tempting morsel he had provided for his hook. The worm was a failure—a common bait fit only for the plebeian chubs and sun-fish—and he threw it away for the luxurious little tidbit, a miniature lobster, but commonly called a crab. Our splendid captive saw the delicacy, and, with that taste and discernment characteristic of his class, he seized his treasure and was taken in the very act. Alexander Smith says the Devil can catch the shrewdest of sinners when he baits his hook with a beautiful limb—so the fisher can catch the wary trout when he knows how to select the choice viands from the larder of nature. He must be wise enough to adapt his bait to the appetite of his victim. Fishes, especially trout, are sometimes particular in respect to their diet. Unlike Luther (a fisher of men), they are not always ready to go to the "diet of worms."

Frank has just caught another great trout, leading him gently by the nose and landing him safely on the island.

The two prisoners of war are anchored in a tiny rivulet which tantalizes them with life without giving them liberty.

What the gazelle is among beasts, and the oriole among birds—the trout is among fishes. The lines of grace and beauty so gratifying to the poet and the artist culminate in absolute

perfection in the trout. The perfect symmetry, the harmonious blending of colors, the graceful motions of this exquisite of the brook, give it a value of great price to all who look at it with appreciative eyes. Look at its large round eyes, orbs of light that never set; its snow-white belly; its sides clad in mail of rainbow hue, dotted with pink stars set in sky-blue tints, and its brown-green back decorated with dark hieroglyphics that look like music notes mixed with the Hebrew alphabet. Perhaps it is the unpublished music that the brook sings forever in the ear of the listening earth. There is a happy blending of snow and sunshine, and star and sky color in the cuticle of the trout.

"Look here," said our king fisher, or rather king of fishermen, "Do you see that dim, shadowy little fellow about the size of a minnow? I gave an affirmative nod. "Well," he continued, "that is a young trout, it ran away from home because it was afraid of its parents—they know what is good to eat, and do not hesitate to devour each other. I should like to secure it for bait."

The effort was made with a quick hand to catch the baby trout; but it darted swift as a thought without wrinkling the face of the water, and thus escaped the torturing impalement.

"I wish I could find a young mouse," remarked Frank; "grasshoppers are good—flies are better—but mouse flesh is a delicacy so rich and so rare, the way the trouts jump at it is a caution to Chinamen."

As I before observed, the saw-dust in the stream—and I may add the coldness of the water, and the great abundance of fish food, made it exceedingly difficult to lure the finny tenants of the flood from their hiding places. The two were sufficient for a meal for two persons, and Frank with his characteristic generosity determined to give one to a sick lady in the neighborhood and cook the other for himself and the writer. It was something like making two bites of a cherry, but we had the pleasure of seeing a bachelor who keeps bachelor's hall prepare the nice bit for the table. A small cooking stove was soon playing off its pyrotechnic tricks, as though a whole Fourth of July had condensed a celebration within its iron walls; a tin kettle sat simmering over the nest of flame; a tiny coffee pot breathed the perfume of the East, brewing the delicious Mocha, until the air was redolent with fragrance that would have made a Turk dance with delight.

When the fire-works and the water-works were well on the way, our bachelor, who is his

own Biddy, spread a snow-white cloth upon the table; placed two plates, two cups with saucers, and two knives and forks, one salt-dish and two spoons, upon the table. These eating instruments were soon followed by a nice loaf of white wheat bread, a dish of butter blushing with luxurious freshness, a bowl of sugar that might have been sifted through the winds with the snow last winter, if judged by its whiteness. The trout which had been beheaded, and disemboweled, and neatly cleansed with water, was next taken in hand. A skewer was thrust through its fat body, exposing its orange-tinted flesh. It was then placed in front of a bed of live coals and roasted in true hunter's fashion. A little salt was sprinkled upon it, and in a few moments the most delicious morsel was cooked and ready for the plate and the palate. My host feared that his mode of cooking the trout would not suit my taste, since most persons prefer such delicacies fried in butter; but hunger is good sauce, and hearty eating is a compliment to cooks. It was a dinner long to be remembered; a dinner well earned, well cooked, and easily digested.

Burchard, the distinguished revivalist being asked to invoke a blessing at a public table, asked the Lord to give the guests speedy waiters, sharp appetites, plenty to eat, and good digestion. We had not that reverend gentleman to ask the blessing, but we had all he prayed for.

Shut in doors by a rain-storm (there had been a parenthesis made in the weather for our accommodation, it having rained just before and immediately after our fishing excursion), I had a fine chance to read the news.

This Bachelor's Hall is a most tempting place to visit. The library is small but select, the proprietor's scrap books form a miniature library of the cream of choice reading—songs, stories, sermons, essays, lectures, criticisms, anecdotes, and everything needed to fill up the chinks and crevices of spare moments; and the bachelor himself is a well-read man—a walking encyclopedia of poetry, history, and philosophy. G. W. B.

Keep Moving.

Don't give up if you happen to fail in anything you undertake. Try it again. Try it a hundred times, if you don't succeed before, and all the while be studying to see if you have not failed through some negligence and oversight of your own. Don't throw down your oars and drift stern foremost, because the tide is against you. The tide don't always run one way. Never anchor because the wind don't happen to be fair. Beat to windward and gain all you can until it changes. If you get to the bottom of the wheel, hang on. Never think of letting go. The next turn will bring you on top.

Are you in debt? don't let time wear off the edge of the obligation. Economize, work harder, and spend less, and hurry out. Does misfortune overtake you? don't sit down and mope, and let her walk over you. Put on more steam—drive ahead, and get out of the way. If you

meet obstacles in your path, climb over, dig under, or go around them—never turn back. Is it stormy to-day? you don't better matters by whining and growling. Be good-natured; take it easy—the sun will shine to-morrow.

Do you lose a few dollars by a bad speculation? never think of collecting a coroner's inquest about your dead body. Don't put on the sulks and long faces because money is not so plentiful as usual; such a course won't add a single dollar to the circulating medium. Keep in good humor; laugh yourself, and do something to make others laugh. There's more health in one good hearty laugh than in a dozen glasses of rum. Be happy, and impart happiness to others. Keep moving, look aloft. Be as prudent as you please, but don't bleach out your hair, and pucker your face into wrinkles ten years ahead of time by a self-inflicted fit of the dysmala.

THE NUTMEG.



The Nutmeg being an article used in every family, we have thought a short description of it, and of the tree that produces it, would prove interesting to our young readers. The above engraving will convey some intelligence of its appearance on the tree. It is thus described:

The Nutmeg tree attains the height of thirty feet. The bark of the trunk is a reddish brown, that of the young branches is of a bright green color. The leaves are nearly elliptical, pointed, undulated, obliquely nerved; on the upper side of a bright green, on the under whitish; the male and female flowers are on different trees.

The flowers of both are small, white, bell-shaped, and without any calyx; the embryo fruit appearing at the bottom of the female flowers in the form of a little reddish knob. The female flowers grow on slender peduncles, two or three together, but it is rare that more than one flower in each bunch comes to maturity and produces fruit; this resembles in appearance and size a small peach, but it is rather more pointed at both ends. The outer coat is about half an inch thick when ripe, at which time it bursts at the side and discloses the spices. These are:

The Mace, having the appearance of a leafy net-work, of a fine red color, which seems the brighter by being contrasted with the shining black of the shell that it surrounds. In general, the more brilliant its hue, the better is its quality. This is laid to dry in the shade for a short space; but if dried too much, a great part of its flavor is lost by evaporation, while it is also more apt to break in packing. On the other hand, if packed too moist, it either ferments or breeds worms. After being dried, it is packed in bags and pressed together very tightly.

THE NUTMEG.—The shell is larger and harder than that of a filbert, and could not, in the

state in which it is gathered, be broken without injuring the nut. On that account the nuts are successively dried in the sun, and then by fire heat till the kernel shrinks so much as to rattle in the shell, which is then easily broken. After this, the nuts are soaked three times in sea water and lime. They are then laid in a heap where they heat and get rid of their superfluous moisture by evaporation. This process is pursued to preserve the substance and flavor of the nut as well as to destroy its vegetative power. Dry lime is the best package for nutmegs.

There are two varieties, the royal and the green. The royal is the largest, and it produces mace longer than the nut; on the nut of the green the mace only reaches half-way down. A good nutmeg should be large, round and heavy, of a light gray color, and finely marbled in the cross section.

Oil of nutmegs is obtained by pressure from the broken kernels; a pound of them generally yields three ounces of oil. According to Neumann's experiments, the oil produced is one-third the weight of the nutmeg. It is yellow, of the consistence of tallow, and of a pleasant smell. This is a fixed oil, but a transparent, volatile oil may likewise be obtained by distillation in proportion of one thirty-second part of the weight of nutmeg used.

The nutmeg is likewise a native of the Moluccas, and after the possession of these islands by the Dutch, was, like the clove, jealously made an object of strict monopoly. Actuated by this narrow-minded policy the Dutch endeavored to extirpate the nutmeg tree from all the islands except Bandy; but it is said that the wood pigeon has often been the unintentional means of thwarting this monopolizing spirit by conveying and dropping the fruit beyond these limits. Thus disseminated, the plant has been always more widely diffused than the clove. This tree grows in several islands of the Eastern Ocean, in the southern part of both peninsulas of India, and has been introduced into the Mauritius and some other places. It was for a long time supposed, that, though the plant could be transplanted, the peculiar aroma of the nut, which gives to the tree its commercial value, was weakened, if not entirely lost, when removed from its native soil, and that, as a spice-producing tree, it, as well as the clove, was confined to the same narrow locality to which the clove was said to be restricted. In Sumatra, however, it has been successfully cultivated to a large extent. Sir Thomas Raffles gives an account of the plantation at Bencoolen in 1820: "Out of the number of 100,000 nutmeg trees," he writes, "one-fourth are in full bearing, and although their culture may be more expensive, their luxuriance and produce are considered fully equal to those of the Moluccas. sanguine hopes are entertained that the clove and the nutmeg will one day be perfectly acclimated in the tropical regions of the Western Hemisphere."

KIND MANNERS.

"Will you lend me your knife to sharpen my pencil, George?" asked little Mary Green of her brother, who was sitting at the opposite side of the table.

George drew the knife from his pocket and pushed it rudely towards her, saying at the same time, "Now, don't cut your fingers off."

The knife fell upon the floor, and, as it was evening, it took Mary some minutes to find it, and here her brother made no offer of assistance. He was studying a geography lesson for the next day, and seemed to be very much engaged with it. At length he closed his book, and at last exclaimed:

"Well, I am glad that lesson is learned."

"And now will you please to show me how to do this sum before you begin to study again?" said Mary, who had been some time puzzling over a sum in subtraction, which appeared to be very difficult.

"You are big enough to do your own sums, I should think, Miss Mary," was the answer.

"Let me see. What! this simple question? You must be stupid, if you cannot do that.—However, I suppose I must help you. Give me the pencil."

The sum was soon explained quite to Mary's satisfaction, and several hints were given her as to those which followed, which prevented her meeting with further difficulty.

Her brother did not mean to be unkind. He loved to help her. It was only his manner which seemed harsh and cross. Presently his mother took her sewing and sat down at the table where her children were studying. George wished for the large dictionary which was in the book-case at the farther end of the room, and he took the lamp and went to look for it, leaving his mother and sister to sit in darkness until his return.

"This is impolite, George," said his mother; "there is another lamp upon the mantel-piece, which you can light if you wish to use one."

George made no reply, but instantly replaced the lamp and lighted another. After finding the dictionary he returned to his seat and hastily blew out the lamp, instead of placing the extinguisher over the flame. The disagreeable smell of the oil filled the room, and his father, who was sitting near, reading the newspaper, looked up and said:

"You are impolite again, my son. Have you not often been told that it is not good manners to blow out a lamp in that way?"

"I can't always think about manners," replied George, rather rudely.

"And yet they are of great consequence, George. A person whose intentions are really good, and who desires to be of use to his fellow beings, may impair his usefulness very much by harsh and unkind manners."

"If we do what is right, father, I should not think it much matter how we did it."

"You are mistaken, George. It makes a vast difference in the amount of good we perform. I will tell you of a little instance which will show you the truth of this: I visited, this morning, a very poor woman in the neighborhood. My

means did not enable me to do a great deal for her relief, but, for the little I gave her, she appeared deeply grateful. Finding that she had formerly been employed as a washerwoman by a gentleman whose office is near mine, and whom I know to be wealthy and benevolent, I asked why she did not apply to him for some relief. The tears came into her eyes as she replied:

"Indeed, sir, I know the gentleman is very kind, and he has helped me before this when things went hard; but, indeed, I would rather suffer than go to him; he has such a harsh way of speaking to a poor body. A kind word is a good thing, sir; it comforts the troubled heart. A penny from some, sir, is worth a dollar from others."

OUR FARMERS.

Their homes are their castles—their hearthstone a throne;

They rule with no sceptre the kingdoms they own;
The stalks and the vines, and the fruit-bearing trees,
Are subjects that bend not to tyrants the knee:

But bend with the weight of the orchard and field,
Ever loyal and faithful, a harvest to yield.
No planning and plotting among them is known—
No traitor the sovereign would strike from his throne.

He stands, 'midst his acres of grass, wheat and maize,
Like Crusoe, "the monarch of all he surveys."
His banks are the earth-banks that stand on his farm:
The banks that are safe when the panics alarm.

The stock is the cattle—not fancy in bread:
The shares are the plow-shares that score for the seed—

Not quoted on 'Change in the broker's array;
But shares on which Nature will dividends pay.

Their banks are not those that the widows condemn;
No officers pilfer deposits from them;
If small the potatoes that in them are found,
Yet none are as small as we find out of ground.

The farmer with appetite ever can eat.
The bread on his table, "as good as the wheat,"
And, loving most dearly his wife, he may utter,
"My bread and my wife! I'll not have any but her!"

With juice of the apple, the wife then may fill
The glass in which lingers no tremors of ill;
And she may respond that, whatever betide her,
Most happy she'll be with her husband beside her!

There's many a hearth where the embers are glowing;
There's many a heart with its joys overflowing;
The hearths and the hearts from the world's rude
alarms,
Are safe in the homes that are reared on our farms.

As daylight can be seen through very small holes, so little things will illustrate a person's character. Indeed, character consists in little acts, and honorably performed; daily life being the quarry from which we build it up, and rough-hewn the habits that form it.

The road ambition travels is too narrow for friendship, too crooked for love, too rugged for honesty, and too dark for science.

Domestic Department.

For the sting of a bee, apply spirits of turpentine. This cures instantly. Hartshorn is also very good.

SKIMMING MILK.—A countrywoman says: The wise man, in enumerating the times and seasons, made no mention of the time to skim milk; yet, nevertheless, there is a time—a right time, too—and that is just as the milk begins to sour in the bottom of the pans.—Then the cream is all at the surface, and should at once be removed, with as little of the milk as possible. If allowed to remain until the acid reaches the cream, it impairs it in quality. The housewife or dairymaid who thinks to obtain a greater quantity by allowing the milk to stand beyond that time, labors under a most egregious mistake. Any one who doubts this has only to try it to prove the truth of this assertion. Milk should be looked to at least three times a day.

TO MAKE A LEMON PIE OUT OF TURNIPS.—Take a turnip and pare and boil it, and a teaspoonfull of tartaric acid, and a cup of sugar; season and bake as an apple pie.

MADRINA CAKE.—Whisk four fresh eggs until they are as light as possible, then, continuing still to whisk them, throw in by slow degrees the following ingredients in the order in which they are written: Six ounces of dry, pounded and sifted sugar; six of flour, also dried and sifted; four ounces of butter, just dissolved, but not heated; the rind of a fresh lemon; and the instant before the cake is molded, beat well in the third of a teaspoonfull of carbonate of soda; bake it an hour in a moderate oven. In this, as in all compositions of the same nature, observe particularly that each portion of butter must be beaten into the mixture until no appearance of it remains before the next is added; and if this be done, and the preparation be kept light by constant and light whisking, the cake will be as good, if not better, than if the butter were creamed. Candied citron can be added to the paste, but it is not needed.

TO ROAST DUCKS.—Put into the bodies a seasoning of boiled onions mixed with minced sage, salt, pepper and a slice of butter. Cut off the pinions at the first joint from the bodies, truss the feet behind the backs, and roast the birds at a brisk fire, but do not place them sufficiently near to be scorched; baste them constantly, and when the breasts are well plumped, and the steam from them draws towards the fire, dish and serve them quickly with a little good brown gravy poured round them, and some also in a tureen. Young ducks, half an hour; full sized, from three quarters to one hour.

BLACK DYE FOR LINEN AND COTTON.—A good dye for linen and cotton may be made by immersing the cloth in a solution of sulphate of iron (or the iron liquor of commerce) until saturated; hang it to dry, but it must not be wrung; and when dry take a sufficient quantity of logwood and make a strong decoction; strain it through a sieve, again boil the liquor, immerse the prepared cloth and keep it boiling for half an hour.

TO BOIL AN OX TONGUE.—Put it into cold water for a few hours, and then boil slowly. Two or three carrots and a bunch of savory herbs, added after the seam has been removed, will improve it. Simmer till it is very tender, when the skin will peel from it easily. A dried tongue will take nearly four hours to boil tender; an unsmoked one about an hour less.

TO CLEAN PAINT THAT IS NOT VARNISHED.—Put upon a plate some of the best whiting; have ready some clean warm water and a piece of flannel, when dip it into the water and squeeze nearly dry; then

take as much whiting as will adhere to it, apply it to the paint, when a little rubbing will instantly remove any dirt or grease; wash well off with water and rub dry with a soft cloth. Paint thus cleaned looks equal to new, and, without doing the least injury to the most delicate color, it will preserve the paint much longer than if cleaned with soap; and it does not require more than half the time usually occupied in cleaning.

RICE DUMPLINGS.—Pick and wash a pound of rice, and boil it gently in two quarts of water till it becomes dry, keeping the pot well covered, and not stirring it. Then take it off the fire and spread it out to cool on the bottom of an inverted sieve, loosening the grains lightly with a fork, that all the moisture may evaporate. Pare a dozen pippins, or some large juicy apples, and scoop out the core. Then fill up the cavity with marmalade, or with lemon and sugar. Cover every apple all over with a thick coating of the boiled rice. Tie up each in a separate cloth, and put them into a pot of cold water. They will require about an hour and a quarter after they begin to boil, perhaps longer.

POACHED EGGS.—Poached eggs make several excellent dishes; but poaching them is rather a delicate operation, as in breaking the egg into the water, particular care must be taken to keep the white round the yolk. The best way is to open the small end of the egg with a knife. When the egg is done—it must be very soft—it should be thrown into cold water, where it may be pared, and its appearance improved, before it is dished up. Poached eggs are served up upon spinach or stewed endive, or alone, with rich gravy, or with stewed onions. They may also be fried in oil until they are brown, when they form a good dish with rich gravy.

FOR RHEUMATISM.—One-half ounce of pulverized saltpetre, one-half ounce of camphor, mixed in one-half a pint of sweet oil. Bathe the parts affected before a fire or hot stove.

TO PERFUME LINEN.—Rose leaves dried in the shade or at about four feet from a stove, one pound; of cloves, carraway seeds and allspice, of each one ounce; pound in a mortar or grind in a mill; dried salt, a quarter of a pound; mix all these together and put the compound into little bags.

SOFT GINGERBREAD.—One cupfull of molasses, one of sour cream, three cupfulls of flour, two eggs, one teaspoonfull of soda, one of ginger.

SORE THROAT.—It has been ascertained by experiment that good fresh yeast, taken internally, is a sovereign remedy for putrid sore throat. It gives almost instant relief.

PIN CRUST.—Take one pint of buttermilk, one large tencup of lard, one teaspoonfull of salt, one teaspoonfull of saleratus, and flour enough to form a dough.—Mix the lard and flour by rubbing them together; then add the other ingredients, knead well, and it is ready to roll out. Tender and good.

LINIMENT FOR SPRAINS AND BRUISES.—A raw egg well beaten, half pint of vinegar, an ounce of spirits of turpentine, a quarter of an ounce of spirits of wine, and a quarter of an ounce of spirits of camphor. These ingredients to be mixed together, first dissolving the camphor in the spirits of wine; then put the mixture in a bottle and shake well together, after which it is to be corked down tightly. In half an hour it will be fit for use.

JUMBLES WITHOUT EGGS.—Two cups sugar, one of butter, one of milk and water, one teaspoonfull essence lemon, one do. cream tartar, half do. soda.

In making syrup for any kind of preserves, one gill of water to each pound of sugar is enough.

Editor's Table.

Only Fifty Cents.

Recollect that new subscribers will be furnished with the VALLEY FARMER commencing with this number to the end of the year for Fifty Cents. We wish each of our subscribers would send one name at these rates. How many of them will do it? All acknowledge it is cheap at One Dollar a year, but this is much cheaper. We think the present number alone is worth to every reader Fifty Cents—and we believe many of our readers will think so.

THE FRUIT CROP.—The prospect of the fruit crop is most flattering. Never have we seen such a promise of fruit in this part of the West before. On low land, as well as high, all kinds of fruit trees are loaded. Gooseberries, strawberries, &c. are very abundant. The poor as well as the rich can have a supply of fruit of all kinds this year, it will be so cheap. Fruit is a great luxury, and we are glad to see it abundant and within the reach of all.

ST. LOUIS COUNTY HORTICULTURAL SOCIETY.—We are happy to state that a Society was chartered by the Legislature of Missouri, last winter, by the above name—that regular weekly meetings are held and interesting discussions on horticultural subjects are had. The meetings are held at the office of the St. Louis Agricultural and Mechanical Association, on Fifth St. at 10 A.M. every Saturday, and all interested in Horticulture are invited to attend.

THE WHEAT CROP.—From every quarter of the West, we have the most favorable accounts of the growing wheat. The past winter has been a very favorable one for this crop. The weather was unusually dry and not subject to those extremes of cold and heat which are generally experienced. An immense harvest awaits the reapers and cradles. On account of the great number of our laboring population becoming for the time being soldiers, we fear labor will be high and laborers scarce. Farmers should commence cutting and securing their wheat a week or ten days earlier than usual. A larger yield and better wheat will be the result.

PROSPECTS OF THE AGRICULTURIST.—The prospect of an abundant yield of farm produce for the land sown, is now evident. But what of the price? inquire all. We think that the price of all the staple articles will be high. There has been an immense drain of hands from the country to carry on the war now fairly begun. There will be fewer hands to cultivate and harvest than usual, and less land by far on the whole will be tilled. Large standing armies are great consumers and no producers, and a vast amount of provisions will be required to sustain them. There is also a prospect of war in Europe, and in that event American food will be required there.

We think the prospects for good prices are flatter-

ing, and we urge our readers to produce all they can, to bestow better cultivation than usual upon all their crops, so as to get the largest possible yield. There will be as much food used as there ever has been, and there will be more than a hundred thousand less producers from both sections of our country. The small Navy bean, buckwheat, and some varieties of corn may yet be planted. Put every acre into something provided you can bestow the proper attention upon it.

AGRICULTURAL MEETING.—At the annual meeting of the Marion County Agricultural Society, held at the Court House in Salem, on Saturday the 6th inst., the following persons were elected officers for the ensuing year: Reuben Chance, President. B. Metcalf, Jas. Wilson, A. J. Pearcy, A. Shansfelt, Vice-Pres'ts, E. L. Merritt, Rec. Sec'y. J. S. Martin, Treasurer. J. P. Huff, J. J. Bennett, W. Perryman, W. D. Vansant, Managers.

The Board adjourned to meet on Saturday, May 4th, 1861. A full attendance is earnestly desired, especially of the members of the old Board, as there is much business of importance to transact.

[Written for the Valley Farmer.]

CROPS IN DAVIESS COUNTY, MISSOURI.—Our prospects are flattering for crops. The fall and spring wheat, rye and oats, look remarkably well. The corn crop is generally planted, and is making its appearance above ground, looking healthy—a large crop being planted. Everything looks as though the farmer was to be amply rewarded for his labor.

There could not be better prospects for all kinds of fruit, with the exception of peaches; and all peach limbs that laid under the heavy snow of last winter are full of bloom.

Taking all things into consideration, Mr. Editor, if our country was acting as near right as old dame Nature we certainly would be blessed above all people, Gallatin, Mo. May 6, 1861. J. SMALL.

[Written for the Valley Farmer.]

ABSTRACT FROM METEOROLOGICAL TABLES, RECORDED FOR MARCH, 1861, BY B. P. HANAN, NEAR LURAY, CLARK CO. MO.—Observations are made at 7 o'clock A. M., 2 o'clock P. M. and 9 o'clock P. M.; but the following will show only the observations made at 2 o'clock P. M.

Wind from N. W. on thirteen days,
 " S. W. " five "
 " S. " two "
 " N. " one "
 " E. " one "
 " S. E. " eight "
 " N. E. " one "

Highest wind on 22d—35 miles per hour. Still on 10th.

Warmest days, 25th and 28th—66° above zero.

Coldest day, 20th—31° above zero.

Average degree of heat, 49.62-100ths° above zero Fah.

Rain in solid depth, 3.69-100ths inches. It rained on the 2d, 23d, 25th, 26th, 28th, 29th, and 31st. The rain from the 22d to the 31st was almost continual, and all that fell, except $\frac{1}{2}$ inch on the 2d.

It snowed 15-100ths of an inch deep on the night of the 5th.

Entirely clear three days.

Entirely cloudy nine days.

Half, or more than half cloudy, on sixteen days.

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[ap'61]

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We shall make the office of our Company a complete mining bureau of the mineral resources of the State. We have power under our charter to purchase and sell mineral lands wherever located in Missouri.—Great inducements will be offered to capitalists and mining adventurers who desire to purchase and work paying mines by dealing with this Company.

We respectfully solicit the attention of all who have mineral lands for sale to send us a statement of the same, describing the kinds of minerals on their lands, the number of acres, the location, and the lowest cash price they are willing to take for said lands.

We shall work only such mines as pay largely, but shall open and prove most of the lands we sell. The books for subscription to the stock are now open at the office of the Company, Main street, north-west corner of Locust, over the Merchants' Bank. Entrance No. 21 Locust street. All who feel an interest in this business, and have money, will do well to call and subscribe. Those wishing stock living out of the city, can secure it by inclosing ten per cent. of the amount wanted to the President or Treasurer.

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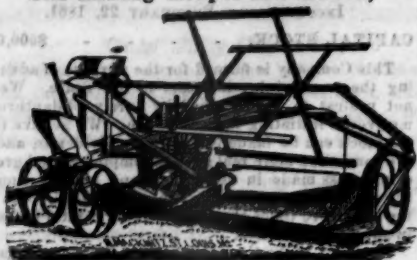
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je'61

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[may'61—3t]

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